ARE AUDIT-RELATED FACTORS ASSOCIATED WITH FINANCIAL

REPORTING QUALITY IN NONPROFIT

ORGANIZATIONS?

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ABSTRACT

In this paper I examine the effects of various audit-related factors on financial reporting quality in nonprofit organizations (NPOs). Similar to for-profit organizations, NPOs have incentives to report favorable financial results. However, whereas for-profit organizations focus on earnings, of particular importance to NPOs is the program ratio – the proportion of total expenses dedicated to providing programs that fulfill an organization's mission relative to supporting the organization (i.e., fundraising efforts and administration). A nonprofit can inflate its program ratio by opportunistically shifting expenses away from administration and fundraising and toward programs.

Although several for-profit papers have examined the impact of audit-related factors on financial reporting quality, especially with regard to earnings management, there is very little evidence on the effects of these factors on financial reporting quality in NPOs. Due to important audit environment and institutional differences between the nonprofit and for-profit sectors, results on audit-related factors in for-profit organizations may not necessarily hold for nonprofit organizations. Thus, the nonprofit sector provides a useful setting to test the generalizability of the effects of audit-related factors on financial reporting quality from the for-profit sector to other sectors.

Using logistic regression analyses, my results suggest that audit fees, new auditors, and the Sarbanes-Oxley Act may have some effect on financial reporting quality in nonprofit organizations. In addition, auditor assessments related to auditee risk, going-concern issues, and reportable conditions over financial reporting also may be factors in nonprofit financial reporting

quality. However, contrary to results found in for-profit studies, new auditors and reportable conditions over financial reporting appear to be associated with *higher* nonprofit financial reporting quality, and auditor size using the traditional Big 4/non-Big 4 designation, as well as audit lag, do not appear to be significant factors in determining nonprofit financial reporting quality. Results are mixed with respect to auditor specialization. Overall, my study provides some evidence that certain audit-related factors are associated with financial reporting quality in nonprofit organizations, and also confirms that, due to the uniqueness of the nonprofit audit environment, results from for-profit studies cannot necessarily be generalized to the nonprofit sector.

DEDICATION

This dissertation is dedicated to my husband, Brian, and my parents, Richard and Rebecca Weghorst. Without their love, support, and encouragement, this research would not have been possible.

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CHAPTER 1

INTRODUCTION

This dissertation examines the effects of audit-related factors on financial reporting

quality in nonprofit organizations (NPOs). Consistent with arguments used in prior literature for

conducting similar audit research in different countries (Francis et al. 2005), audit research on

nonprofit organizations is called for despite the plethora of compelling audit evidence found in

for-profit studies as: (1) the nonprofit audit environment is qualitatively different than the for-

profit audit environment and (2) there are important institutional differences between the

nonprofit and for-profit sectors. Thus, the nonprofit sector is a unique environment in which to

study the role of auditing and this study helps determine the generalizability of findings

regarding audit-related factors and financial reporting quality from the for-profit sector to the

nonprofit sector.

Similar to for-profit organizations, NPOs have incentives to report favorable financial

results. However, whereas for-profit organizations focus on earnings, of particular importance to

NPOs is the program ratio— the proportion of total expenses dedicated to providing programs

that fulfill an organization's mission relative to supporting the organization (i.e., fundraising

efforts and administration). This ratio (i.e., program expenses divided by total expenses) is the

performance metric most commonly used by donors and other NPO stakeholders in evaluating

the efficiency and effectiveness of NPOs and influences contribution, managerial compensation,

and charity watchdog rating decisions (Weisbrod and Dominguez 1986; Posnett and Sandler

1989; Stout 2001; Tinkelman 1999; Parsons 2003; Gordon et al. 2009; Jones et al. 2010; Baber et

al. 2002; Krishnan et al. 2006).[1] A nonprofit can inflate its program ratio by opportunistically shifting expenses away from administration and fundraising and toward programs, and both survey and empirical evidence indicate that some nonprofit organizations engage in such program ratio management behavior (Jones and Roberts 2006; Krishnan et al. 2006; Keating et al. 2008; Parsons et al. 2011).[2] This behavior reduces the decision usefulness of financial information, thereby lowering the quality of nonprofit financial reporting (Yetman and Yetman 2011a). Given the significance of the nonprofit sector to the economy, the increasing demand for accountability within the sector, and the potential for the misallocation of scarce resources, it is important to consider how governance mechanisms, specifically the monitoring provided by external auditors, impact the quality of this sector's financial reports.[3]

Since 1990, NPOs receiving substantial amounts of federal funding have been required to undergo financial and compliance audits (Keating et al. 2005).[4] Using a combined dataset of results from these financial and compliance A-133 audits filed with the United States Federal Audit Clearinghouse (FAC) and IRS Form 990 informational return filings for the period 1997-2008, I examine whether and how various audit-related factors are associated with NPO financial reporting quality. The three measures of nonprofit financial reporting quality I utilize in this study relate to whether or not the organization (1) has an abnormally high program ratio as

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[1] Total expenses are the sum of program, fundraising, and administrative expenses. Administrative expenses are also often referred to as management and general expenses. See Appendix A for details on the calculation of the program ratio.

[2] Nonprofit studies refer to this practice using various terms in addition to program ratio management, such as cost shifting, expense misreporting, expense misallocation, accounting manipulation, or financial statement manipulation. Equivalent for-profit terms are earnings management or earnings manipulation.

[3] The increasing demand for accountability has been fueled by several recent high-profile financial scandals in the nonprofit sector (Petrovits et al. 2011; Vermeer et al. 2006; Vermeer et al. 2009a). These scandals involved exorbitant executive spending (Oral Roberts University), embezzlement of funds (ACORN, the United Way, and the American Cancer Society, Ohio Division), pyramid schemes (Baptist Foundation of Arizona and New Era Philanthropy), and other fraudulent activities.

[4] These audits apply to recipients of federal funding that expend at least $500,000 ($300,000 prior to 2004) in federal awards during a fiscal year and are referred to as Single audits or A-133 audits.

estimated from a regression specification; (2) reports zero fundraising costs when it plausibly should report nonzero amounts; and (3) reports zero administrative costs when it plausibly should report nonzero amounts.

The independent variables include common audit-related variables used in the for-profit literature on reporting quality as well as a set of factors unique to A-133 audits that may be associated with reporting quality in nonprofit organizations. Specifically, these variables include auditor size, auditor specialization, new auditors, audit fees, audit lag, audit regulatory era (pre- or post-SOX), low risk auditee designation, going-concern issue, internal control weaknesses over financial reporting, and material non-compliance with federal regulations. After controlling for various financial and organizational characteristics previously found to be associated with NPO reporting quality (Trussel 2003; Yetman and Yetman 2011a), I find that although some of the audit-related variables examined in the for-profit literature have similar effects on financial reporting quality in the nonprofit sector, others have different effects. I also find that some of the variables unique to A-133 audits are in fact associated with financial reporting quality.

Specifically, in my main results I find that audit fees, new auditors, and the Sarbanes-Oxley Act may have some effect on financial reporting quality in nonprofit organizations. In addition, auditor assessments related to auditee risk, going-concern issues, and reportable conditions over financial reporting also may be factors in nonprofit financial reporting quality. However, contrary to results found in for-profit studies, new auditors and reportable conditions over financial reporting appear to be associated with *higher* nonprofit financial reporting quality, and auditor size using the traditional Big 4/non-Big 4 designation, as well as audit lag, do not appear to be significant factors in determining nonprofit financial reporting quality. Furthermore,

I find no evidence that auditor specialization is associated with financial reporting quality and material non-compliance with federal regulations does not appear to be an important factor.

Results from performing numerous sensitivity analyses are largely consistent with these main results with two notable exceptions: (1) I find mixed results using various alternative auditor specialization measures and (2) I find positive and significant auditor size results when defining auditor size as Big 25 or non-Big 25 auditing firm. The first exception suggests a need for future studies to revisit measures of auditor specialization for nonprofit organizations and the second exception suggests that auditor size may have very different quality implications for nonprofit organizations compared to for-profit organizations. Overall, my study provides some evidence that certain audit-related factors are associated with financial reporting quality in nonprofit organizations, and also confirms that, due to the uniqueness of the nonprofit audit environment, results from for-profit studies cannot necessarily be generalized to the nonprofit sector.

By improving our understanding of factors that influence nonprofit financial reporting quality, this study's findings may be of interest to various NPO stakeholders, such as NPO boards of directors, governmental regulators, charity watchdog agencies, and policymakers, that seek to improve the quality of NPO financial reports and restore confidence in the integrity of nonprofit organizations. Additionally, the findings may have important implications for nonprofit researchers relying on for-profit audit research to predict nonprofit behavior.

The dissertation is organized as follows. Chapter 2 provides background information on nonprofit organizations, IRS Form 990, and A-133 financial and compliance audits. Chapter 3 reviews prior literature related to management of the program ratio. Chapter 4 develops hypotheses relating audit-related factors to nonprofit financial reporting quality. Chapter 5

describes the research design and variable measurement and Chapter 6 discusses the sample

selection procedures and data employed in this study. Chapter 7 presents the main empirical

results and Chapter 8 presents extensive sensitivity analyses. Chapter 9 describes the

contributions of the research and discusses the limitations of the study. Chapter 10 concludes and

offers suggestions for future research.

CHAPTER 2

BACKGROUND

2.1 Purpose, Mission, Importance, and Characteristics of Nonprofit Organizations

Since shortly after the American Revolution, nonprofit organizations have played key roles in American society. They have grown to occupy a substantial part of the U.S. economy in the past three decades (Hammack 2002) and the nonprofit sector in the U.S. has recently grown faster than the business or government sectors (Wing et al. 2008). According to the 2010 *The Nonprofit Sector in Brief*, nonprofits had over $4.3 trillion in assets under their control and generated over $1.9 trillion in revenue in 2008. Charitable giving to these organizations in 2009 made up approximately 2.2 percent ($303.8 billion) of the year's gross domestic product. Additionally, NPOs employed ten percent of the country's workforce in 2009 with these employees accounting for nine percent of the wages paid in the U.S. that year (Independent Sector 2011). Twenty-six percent of U.S. adults volunteered through a nonprofit organization in 2009, contributing a total of fifteen billion hours during the year, worth approximately $279 billion at average wages (Wing et al. 2010).

Although research into the nonprofit sector offers several theories as to why nonprofits exist, two theories prevail: government failure and market failure. The concept of government failure as the motive for nonprofit creation was developed by Weisbrod (1977, 1988). He argues that in providing public goods, the government will fulfill the needs of the median voter, leaving some citizens with unfulfilled demand. As a result, nonprofits will fill these gaps left by government (Clotfelter 1989). The concept of market failure (or contract failure) as the motive

for nonprofit creation was proposed by Hansmann (1980). He argues that market failure is effectuated by insufficient information on the quality of goods and services (information asymmetry) (Boris 2006). Since nonprofits are prohibited from distributing profits, they may be perceived by consumers as more trustworthy in providing goods and services in which the quality is not easily apparent (e.g., Hansmann 1980 gives the example of a hospital patient as a consumer not having the knowledge to evaluate the service being provided) (Von Hagen et al. 1998; Clotfelter 1989).

When comparing for-profit organizations to nonprofit organizations, it is apparent that there are differences related to organizational goals, financial needs, organizational structure, accounting rules, financial reports, and types of financial statement users (Tate 2007; Lopez and Peters 2010; Vermeer et al. 2009a). Whereas the goal of for-profit entities is to maximize profit for their owners, the mission of NPOs is to maximize service output to their constituents (Trussel 2003). Maximization of this output is limited to the budget of current and accumulated funds and involves maximizing revenues, minimizing non-charitable expenses (administrative and fundraising), and maximizing charitable (program) expenses (Yetman and Yetman 2011a; Yetman and Yetman 2011b).

Because they serve the common good, NPOs receive special tax treatment and other privileges (Petrovits et al. 2011).[5] NPOs do not issue shares and thus are not accountable to shareholders; instead they are accountable to donors and grantors, upon whom they rely for capital, to the IRS from whom they receive their tax exempt status and to whom they must report their financial results annually, and to the respective state from which they receive their legal

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[5] Most NPOs are either private foundations or public charities organized under Section 501(c)(3) of the Internal Revenue Code and 501(c)(3) organizations are exempt from federal income tax. Public charities receive substantial support from the general public or government and actively conduct charitable operations while private foundations generally receive funding from a single source, such as a corporation or family, make grants to other organizations, and earn investment income (Petrovits et al. 2011). The focus of this study is on public charities.

existence. NPO resource providers, unlike shareholders, do not expect to receive benefits that are proportionate to the resources provided (FASB 2008). Also, since NPOs do not issue stock, they are neither subject to the provisions of the Securities and Exchange Commission Acts of 1933 and 1934 nor to most provisions of the Sarbanes-Oxley Act (Yetman and Yetman 2011a).[6]

Unlike public companies that are required by law to produce financial statements, undergo a financial statement audit, and make their audited financial statements and results publicly available, federal law does not require NPOs to produce financial statements (other than IRS Form 990) and there is no general audit requirement (Yetman and Yetman 2011a; Krishnan et al. 2006). NPOs are, however, required by federal law to make their three most recently filed Form 990s available to the public. Despite the lack of a general legal requirement for NPOs to produce audited financial statements, it is not uncommon for these organizations to produce financial statements and undergo audits (Krishnan et al. 2006).[7] Many boards of directors require audited financial statements for oversight purposes, several states require them under certain circumstances as a condition of solicitation within that state, and many lenders, grantors, and federal and state governments require them as a condition of funding (Krishnan et al. 2006).

Although these audited NPO financial statements are generally not available to the public, they must still comply with GAAP, including supplemental GAAP written specifically to address nonprofit issues.[8] For example, FASB Statement No. 117 was established to address diversity in nonprofit financial reporting display (Robbins and Polinski 1995). This statement requires that NPOs prepare a statement of financial position (a balance sheet), a statement of

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[6] The two areas of SOX that are applicable for NPOs are the rules relating to document destruction and whistleblower protection.

[7] All of the nonprofit organizations included in my study are required by law to undergo a financial statement audit in accordance with the statutes of the Single Audit Act of 1984 (and amendments in 1996) and OMB Circular A-133 as a condition of accepting federal funding. I describe the nature of these audits in more detail later in the paper.

[8] The FASB is the primary standard-setter for NPOs.

activities showing changes in financial position, and a statement of cash flows. Additionally, it requires NPOs to report expenses by functional classification (program services, management and general, and fundraising) on either the statement of activities or in the footnotes to the financial statements and nonprofits classified as voluntary health and welfare organizations (VHWOs) are required to present a separate statement of functional expenses.[9] Although the first three statements are similar in form to those of for-profits, many differences exist, including differences in revenue types and recognition, in the reporting of net assets rather than shareholders' equity, and in the reporting of expenses into their functional classifications. These differences relate to the differences in the organizational objectives (lucrative return versus societal progress) and financial reporting objectives between for-profit and nonprofit organizations (Khumawala and Gordon 1997).[10]

In addition to FASB Statement No. 117 related to financial reporting display, the FASB has issued other statements specifically applicable to nonprofits. These include rules related to depreciation (SFAS No. 93), contributions (SFAS No. 116), investments (SFAS No. 124), and transfers of assets (SFAS No. 136). See Appendix B for executive summaries of these five statements.

Similar to for-profit organizations, users of nonprofit financial reports include lenders, managers, suppliers, and government agencies. Additional users of nonprofit financial reports include donors, grantors, charity watchdog groups like the Better Business Bureau, federated

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[9] Voluntary health and welfare organizations (VHWO) are "organizations [that] receive contributions from the public at large and provide health and welfare services for a nominal or no fee" (Wilson et al. 2010, 580). Examples include the Girl Scouts and the American Cancer Society. These organizations are also referred to as human service organizations.

[10] According to SFAC No. 1 (and later SFAC No. 8), financial reporting for business organizations should provide information that is useful to present and potential investors, creditors, and other users in making rational investment and credit decisions. According to SFAC No. 4, financial reporting for nonbusiness organizations should provide information that is useful to present and potential resource providers and other users in making rational decisions about the allocation of resources to those organizations.

fundraising campaigns such as the United Way, and taxpayers.[11] Absent from this list of users

are investors (stockholders). A lack of stockholders is the result of what Hansmann (1980) refers

to as the nondistribution constraint – the prohibition of nonprofits to distribute profits – and is

imposed as a condition for an NPO to receive its corporate charter and tax-exempt status. Thus,

nonprofits are primarily distinguishable from for-profits due to the absence of stock or other

forms of ownership that give their owners a share in both control and profits (Hansmann 1980).

It is important to note that although NPOs are prohibited from distributing profits they are not

prohibited from earning a profit. Such earnings, if any, must be retained and used to provide the

services that the organization was formed to provide (Hansmann 1980). Although there are no

owners in the nonprofit setting, such absence does not guarantee that NPOs will be free of

agency conflicts (Krishnan et al. 2006). Just as control and ownership are separate in the for-

profit setting, stewardship (similar to control) and funding (instead of ownership) are separate

and as such, agency theory can apply to both settings (Yetman and Yetman 2011a). The

objectives and interests of NPO managers may not be identical to those of the public they serve,

resulting in agency loss. Examples of such behaviors include managers who "consume excessive

perquisites, exert lower effort, or expend resources on activities peripheral to the stated mission

of the organization" (Krishnan et al. 2006, 402).

Nonprofits and for-profits also differ with respect to employee compensation and

stakeholders' expectations for board members. Studies find that compensation for NPO

executives and workers is substantially lower on average than their for-profit counterparts (Panel

on the Nonprofit Sector 2005) and a significant share of work in NPOs is done by volunteers

who receive little or no financial compensation. Additionally, unlike for-profit company board

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[11] A federated fundraising organization is "an organization composed of independent charitable organizations that
have voluntarily joined together to raise and distribute money among themselves" (Wilson et al. 2010, 751).

members, the majority of NPO board members serves without compensation and often donates both their time and money to the organization, practices which support the sector's culture of volunteering and giving (Panel on the Nonprofit Sector 2005).[12]

Given the aforementioned differences between the nonprofit and for-profit sectors, Tate (2007) and Vermeer (2008) suggest that the monitoring needs provided by external auditors likely differ for NPOs compared to for-profit companies and several studies note that the audit risk environment and structure of the audit market differ between the two sectors. Both Tate (2007) and Vermeer (2008) point out that the need for monitoring may be more critical for NPOs than for their corporate counterparts. Donors must rely heavily on auditors "to ensure their funds were used consistently with their intent" since the donors typically "receive no direct benefit from the charitable contributions they provide to a nonprofit, and therefore, cannot directly see how the funds were used" (Tate 2007, 50-51).

Prior studies note that audits of NPOs expose auditors to lower levels of litigation risk compared to audits of public companies, thereby resulting in minimal threat of litigation from NPO audit failures (Brown and Raghunandan 1995; Beattie et al. 2001; Vermeer 2008; Lopez and Peters 2010). Donors, unlike shareholders, generally do not have standing to bring lawsuits against NPOs or their auditors (Gordon et al. 1999; Beattie et al. 2001; Vermeer 2008). Several studies (Keating et al. 2005; Tate 2007; Tate 2009; Petrovits et al. 2011) indicate that auditor concentration is much different in the nonprofit sector than in the for-profit sector. Unlike the for-profit audit market which is dominated by the Big 4 firms, the majority of nonprofit audits are performed by smaller audit firms. Additionally, CPA firms that audit NPOs encounter issues and risk factors that are specific to this sector (Vermeer 2008). Some of these include internal

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[12] NPO board members are often selected based on their ability to both raise funds for the organization and donate money to the organization rather than on their business or financial acumen.

control issues from donations, lower audit fees compared to the for-profit sector, a lack of supervision over volunteer workers, and going concern issues due to uncertain future income (Beattie et al. 2001; Vermeer 2008).

2.2 Nonprofit Regulatory Oversight

As noted by Petrovits et al. (2011), most NPOs are monitored by two regulatory mechanisms: (1) nonprofit laws in the state of incorporation, which vary greatly across states, and (2) the IRS which requires that most NPOs organized as non-church 501(c)(3) entities with gross receipts of at least $25,000 must file Form 990 ("Return of Organization Exempt from Income Tax") annually.[13],[14] Additionally, under the Single Audit Act, the federal government requires that all NPOs that expend at least $500,000 ($300,000 prior to 2004) of federal monies in any given year must have an audit performed in accordance with the U.S. Office of Management and Budget's Circular No. A-133.

Although state laws regulating NPOs vary across the fifty states, these regulations typically relate to the following topics: incorporation, registration, licenses, tax exemption, and lobbying and political activity (Wilson et al. 2010).[15] Additionally, some states, such as California, now require NPOs of a certain size to undergo financial statement audits by independent public accountants. IRS Form 990 is "the primary tool the federal government uses to collect information about the NPO and its activities" (Wilson et al. 2010, 636), serves as the principal source of publicly available NPO financial information (Krishnan et al. 2006; Hager 2003a; Yetman and Yetman 2011a), and is "relied on by the public, state regulators, the media, researchers, and policymakers to obtain information about the tax-exempt sector and individual

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[13] Most NPOs must apply to the IRS for tax-exemption from federal income tax.

[14] The IRS recently raised the $25,000 threshold, which had never been indexed for inflation, to $50,000, beginning with the calendar year ending December 31, 2010.

[15] See Irvin (2005) for a description of the range of state regulation of nonprofit organizations as well as a discussion of the motivations state regulators may have in promulgating registration and reporting requirements for NPOs.

organizations" (IRS 2008, 1). It is considered an informational return rather than a tax return as the organizations that file it do not pay income taxes (except for organizations that report income from activities unrelated to their exempt purposes). This form provides a great deal of financial information about the organization, including its revenues, expenses, changes in net assets, assets, liabilities, net assets, and executive and board member compensation.[16] The 990 requires expenses to be separated into their functional categories (program, management and general, and fundraising). It must be filed with the IRS by the fifteenth day of the fifth month following the organization's year-end. A nonprofit can get an automatic three-month extension by submitting Form 8868 to the IRS. The organization often can get another three-month extension by submitting a second Form 8868.

According to the Office of Management and Budget (OMB), the federal government provides over $400 billion in grants to state, local and tribal governments, colleges, universities, and other nonprofit organizations (non-federal entities) each year. The Single Audit Act of 1984 (with amendments in 1996) and OMB Circular A-133 "Audits of States, Local Governments and Non-Profit Organizations" provide audit requirements for those non-federal entities that expend $500,000 ($300,000 prior to 2004) or more of such federal monies in a year in order to ensure proper expenditure of these funds as well as organizational compliance with all federal regulations.[17],[18] The audits (referred to as Single Audits or A-133 audits) must be performed by an independent auditor and encompass both compliance and financial components. They include all of the procedures of a traditional audit as well as additional procedures related to internal

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[16] Net assets is equal to the difference between total assets and total liabilities and its for-profit equivalent is owners' or stockholders' equity. Changes in net assets is equal to revenues minuses expenses and its for-profit equivalent is net income.

[17] More information about Single Audits can be found at http://www.whitehouse.gov/omb/financial_fin_single_audit.

[18] As a result of the 1996 amendments, the required audit threshold is now based on the amount of federal awards expended rather than received, as was the case before the amendment (Wilson et al. 2010).

controls and federal funding (Keating et al. 2005; Yetman and Yetman 2011a), and "fulfill all the requirements of states or other funding agencies that require audits" (Yetman and Yetman 2011a).

Specifically, auditors are required to provide opinions on both the organization's financial statements and compliance for major federal award programs (unqualified, qualified, adverse, or disclaimer), as well as report on the organization's internal control over both major programs and financial reporting (discoveries of reportable conditions and material weaknesses), any instances of noncompliance with laws, regulations, contracts, or grant agreements that have a direct and material effect on the financial statements, whether or not the organization qualified as a low-risk auditee, and the organization's ability to continue as a going concern.[19] The determination of major programs is based on size (percentage of total federal awards expended), risk, and oversight by a federal agency. Circular A-133 provides certain criteria a nonprofit must meet in order to qualify for low-risk classification. This low-risk assignment requires that the organization must have been audited for the last two years and these audits must have resulted in unqualified financial statement opinions, no material weaknesses in internal controls, and no audit findings related to federal programs. Organizations granted this low-risk status are subject to less extensive auditing of their major programs.[20]

Form SF-SAC, which contains the summary of the Single Audit results, must be filed with the Federal Audit Clearinghouse (FAC) within the earlier of thirty days after receipt of the auditor's report or nine months after the end of the audit period.[21] Until recently, the auditee or

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[19] In 2007 the OMB revised the wording in Circular A-133 by replacing the term "reportable conditions" with "significant deficiencies" in order to conform to SAS No. 112.
[20] This low-risk designation does not affect the auditing of their financial statements, however.
[21] The Federal Audit Clearinghouse operates on behalf of the Office of Management and Budget. The FAC receives, processes, and disseminates Single Audit information to federal agencies and the public. Since 1997 it has maintained a database of Single Audit submissions.

its auditor could request an extension from the Federal government for late Single Audit filings

with the FAC.[22] The individual SF-SAC forms as well as a database of the information reported

on the SF-SAC forms are publicly available and can be obtained from the FAC website at

http://harvester.census.gov/sac.[23]

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[22] Single Audit filing extensions were eliminated beginning with fiscal year 2009.
[23] Although the summary of the Single Audit results are publicly available (via the FAC website), the related audited financial statements typically are not.

CHAPTER 3

REVIEW OF LITERATURE RELATED TO MANAGEMENT OF THE PROGRAM RATIO

3.1 Introduction

The extant literature presents considerable evidence of earnings management activities by managers of for-profit organizations (Schipper 1989; Healy and Wahlen 1999; Dechow and Skinner 2000; Graham et al. 2005; Habib and Hansen 2008). However, for-profit managers are not alone in the practice of intervening in the financial reporting process to present favorable financial results. Jones and Roberts (2006, 159) note that the financial results of nonprofit organizations (NPOs) "can be consequential and, therefore, potentially worth managing" and although often regarded as benevolent, selfless organizations, evidence does suggest that some NPOs, like many for-profit organizations, respond to incentives to manage their financial results (Yetman and Yetman 2011a). While management of financial results by for-profit managers tends to focus on net income, management of financial results by nonprofit managers is more likely to focus on the program ratio (Khumawala et al. 2005). This chapter presents a review of the extant literature on nonprofit program ratio management as well as for-profit research that is relevant to this study.

The chapter is organized as follows. The next section outlines various methods of managing the program ratio. Section three presents a discussion of the motives behind managing the program ratio. Section four surveys research that provides evidence that nonprofits engage in such behavior. Section five discusses potential costs associated with program ratio management and section six summarizes donors' reactions to inflated program ratios. Section seven covers

studies on factors that mitigate program ratio management and discusses the need for additional

research related to the role that auditors play in limiting program ratio management. The last

section presents the foundation for this dissertation.

3.2 Methods of Managing the Program Ratio

NPO stakeholders commonly view high program ratios as indicators of more efficient

and effective organizations. NPO managers can inflate their program ratios by opportunistically

underreporting their fundraising and/or administrative expenses. The existing literature presents

three ways by which nonprofit managers can understate these expenses: 1) misclassifying

expenses, 2) misallocating shared (or "joint") costs, and 3) misreporting telemarketing expenses.

I will examine each of these methods in turn.

3.2.1 Expense Misclassification

Both SFAS No. 117 and IRS 990 accounting rules require nonprofits to classify their

expenditures among three functional categories (program, fundraising, and administrative). In

order to improve its program ratio, a nonprofit may choose to inappropriately classify some or

even all of its fundraising expenses in the program expenses functional category (Hager 2003a).

The same is true regarding its administrative expenses (Yetman and Yetman 2011a).

3.2.2 Shared (or "Joint") Costs

Shared (or "joint") costs represent expenses incurred for multiple purposes (functions).

Examples include "rent for a building that is used for classes (program expense) and

administrative offices (administrative expense) or postage to pay for a flier that asks for a

donation (fundraising expense) and provides educational information (program expense)"

(Parsons et al. 2011, 18). A nonprofit can improve its program ratio by inappropriately over-

allocating these shared costs to programs and under-allocating them to fundraising and/or

administrative.

Although the term "joint cost" can refer to any cost that is related to multiple functions, it

is most often used to refer to the costs of activities that combine the fundraising function with

another function, usually some type of program activity (Hager 2003a). For example, the direct

mailing described above is an example of a joint cost activity. In response to concerns that

nonprofits were hiding their fundraising costs by allocating most or all of their joint costs to

programs, the AICPA issued in 1998 Statement of Position (SOP) 98-2 "Accounting for Costs of

Activities of Not-for-Profit Organizations and State and Local Governmental Entities That

Include Fund Raising." This standard, which tightened previous standards' restrictions, continues

to allow organizations to allocate joint costs across functions but only for expenses that meet

three criteria: purpose, audience, and content (Khumawala et al. 2005).[24] If any of the three

criteria are not met, all of the joint costs must be reported as fundraising. However, due to the

technical nature of the rules and the lack of required allocation methods, managers still have

discretion in regard to which costs they consider joint and how those costs are allocated among

the three functional categories (Jones and Roberts 2006; Hager 2003a). Changing either the level

of joint costs or the share of joint costs allocated to programs can increase the reported program

ratio (Jones and Roberts 2006).

3.2.3 Telemarketing Expenses

Due to the complexity and time involved with large scale fundraising campaigns, many

NPOs opt to hire professional fundraising firms to conduct telemarketing campaigns (Keating et

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[24] Earlier SOPs related to the allocation of joint costs (SOP 78-10, "Accounting Principles and Reporting Practices for Certain Nonprofit Organizations" and SOP 87-2, "Accounting for Joint Costs of Informational Materials and Activities of Not-for-Profit Organizations That Include a Fund Raising Appeal") were criticized for being too permissive (Tinkelman 1998; Khumawala et al. 2005).

al. 2003; Keating et al. 2008). Under both SFAS No. 117 and IRS 990 accounting rules, all revenue and related expenses must be reported at their gross amounts (Keating et al. 2008). Thus, when NPOs use professional fundraisers to conduct telemarketing campaigns, the gross proceeds collected should be reported as contributions revenue and the fees paid to the professional fundraisers should be reported separately as fundraising expense. However, to improve its program ratio, a nonprofit may intentionally hide these fundraising expenses by netting them against contributions or spreading them across functional categories.

3.2.4 Strategic Operating Decisions

In addition to managing the program ratio via accounting practices, nonprofit organizations may also attempt to improve their program ratios by making real changes in activities (similar to real earnings management in for-profit organizations) (Tinkelman 2009; Parsons et al. 2011; Jones and Roberts 2006). These real activities can include reducing fundraising efforts, cutting back on or delaying administrative spending, or accelerating program spending. Although such actions are permissible by GAAP and contribute to the appearance of increased efficiency, they may result in reduced organizational effectiveness. For example, Parsons et al. (2011) note that nonprofit managers that delay IT purchases may find it difficult to monitor the quality of service provided.

3.3 Incentives or Motives for Nonprofit Organizations to Manage the Program Ratio

Incentives to engage in program ratio management behavior are numerous. First, evidence suggests that the program ratio may be used in setting executive compensation. Baber et al. (2002) find that changes in executive compensation are positively associated with changes in the program ratio. This finding is consistent with evidence from the for-profit sector, which

documents that accounting performance measures are used by boards in making executive compensation decisions (Baber et al. 2002).

Second, survey evidence suggests that donors consider the program ratio important (Hager et al. 2001; Keating et al. 2003; Parsons et al. 2011). For example, Hager et al. (2001) and Keating et al. (2003) note that a 1988 Roper Organization survey found that eighty-two percent of respondents rated the amount spent for programs as important in their decision to contribute to a nonprofit organization. A survey conducted by Princeton Survey Research Associates in 2001 found that seventy-nine percent of donors feel it is important to know what percentage of total spending goes to programs (Keating et al. 2003; Parsons et al. 2011). Furthermore, several academic studies find evidence to suggest that donors use the program ratio in their donation allocation decisions (Weisbrod and Dominguez 1986; Posnett and Sandler 1989; Callen 1994; Tinkelman 1998; Tinkelman 1999; Wong et al. 1998; Stout 2001; Yetman and Yetman 2011b). Specifically, these studies find that donation levels are positively associated with the program ratio, with results consistent across various countries including the U.S. (Weisbrod and Dominguez 1986; Tinkelman 1998; Tinkelman 1999; Stout 2001), the U.K. (Posnett and Sandler 1989), Singapore (Wong et al. 1998), and Canada (Callen 1994).

Third, charity watchdog agencies, such as the Better Business Bureau's (BBB's) Wise Giving Alliance, have guidelines for acceptable program ratios which they use in evaluating nonprofit organizations (Khumawala et al. 2005). Organizations that meet these established guidelines are more likely to receive favorable reviews by these agencies and are less likely to receive unfavorable attention from the press (Khumawala et al. 2005; Jones and Roberts 2006; Tinkelman 2009).[25] For example, nonprofits included in the American Institute of Philanthropy's

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[25] The Better Business Bureau's Wise Giving Alliance reports on its website, www.bbb.org, that its guidelines require that an organization spend at least 65% of its total expenses on program activities. The American Institute of

(AIP's) list of Top-Rated charities generally spend 75% or more of their budget on programs. Additionally, in determining its list of the nine worst-run charities in 2009, website 24/7 Wall St. relied on AIP's ratings as well as considered data from Charity Navigator and the BBB. It named Cancer Fund of America to its list primarily for the fact that it "only spends 17% of its budget on program services."[26] Furthermore, research finds that these watchdog ratings influence donors' giving decisions (Gordon et al. 2009). Using both Charity Navigator's star rating (0-4) and the numeric score (0-70) from which the star rating was derived, Gordon et al. (2009) find that positive ratings changes are associated with an increase in contributions and rating declines are associated with decreased contributions.

3.4 Evidence of Program Ratio Management Activities

In response to the incentives and pressures to report favorable program ratios, some nonprofit managers appear to indeed be engaging in dysfunctional behavior resulting in questionable reporting and operational practices.

3.4.1 Expense Misclassification

Several researchers note that a high percentage of nonprofits report zero fundraising costs despite reporting substantial contributions (Hager 2003a; Krishnan et al. 2006; Wing et al. 2006; Yetman and Yetman 2011a; Yetman and Yetman 2011b), report zero administrative expenses (Wing et al. 2006; Yetman and Yetman 2011a), or incorrectly spread certain types of expenditures, such as accounting fees, across more than one functional category despite clear

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Philanthropy suggests on its website, www.charitywatch.org, that a program ratio of 60% or higher is reasonable for most organizations. Although Charity Navigator does not recommend a specific guideline for the percent that an organization should report for program expense, they do indicate on their website, www.charitynavigator.org, that organizations that report program ratios greater than 75% will receive maximum points for that particular component of the organization's overall financial health rating (Gordon et al 2009). Additionally, organizations with program expenses less than 33.3% will receive zero points.

[26] See 2010 article by Jonathan Berr and Charles Stockdale at http://247wallst.com/2010/11/19/the-most-mismanaged-non-profits/.

GAAP and 990 instructions to report them in a particular category (Wing et al. 2006; Hager 2003a; Keating et al. 2008).[27] As these three reporting practices seem to defy plausibility, it is widely suspected that organizations engaged in these practices are doing so to improve their program ratios and thus, improve the public's perception of their efficiency (Hager 2003a; Krishnan et al. 2006; Wing et al. 2006; Yetman and Yetman 2011a; Yetman and Yetman 2011b).

Research conducted by Krishnan et al. (2006) and Hager (2003a) appears to confirm these suspicions. After searching the websites of a sample of organizations that report zero fundraising expenses, Krishnan et al. (2006) find evidence of fundraising activities that would result in the reporting of fundraising expenses in almost half of the organizations examined. They also find that the more sensitive an organization's donations or managerial compensation are to the program ratio, the more likely it is to report zero fundraising expenses. Hager (2003a) evaluates 990 annual reports and finds that twenty-six percent of organizations that report professional fundraising fees do not report any of these fees as fundraising expenses but rather report them solely as program or administrative expenses or allocate them between these two categories. Another seven percent allocate these expenses across all three categories. Furthermore, a national survey of over 1,500 nonprofits conducted by Mark Hager, Thomas Pollak, Kennard Wing, and Patrick H. Rooney in 2001 and 2002 corroborates this finding that many nonprofits are accounting for fundraising expenses as administrative or program expenses.[28]

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[27] Zero reported fundraising and administrative expenses likely indicate that fundraising and administrative expenses are understated and that these understated expenses end up as overreported program expenses (Yetman and Yetman 2011a; Yetman and Yetman 2011b).

[28] This survey was part of a project that came to be known as the "Nonprofit Overhead Cost Project." In addition to the survey, this five year project included analysis of over 250,000 IRS Form 990s and in-depth case studies of nine nonprofit organizations.

3.4.2 Shared (or "Joint") Costs

Jones and Roberts (2006) and Tinkelman (2009) provide evidence that nonprofits use joint cost allocations to manage their program ratios. Using a sample of nonprofits that report engaging in joint cost activities, Jones and Roberts (2006) find that these organizations use both the share of joint costs allocated to programs as well as the level of joint costs to alter their reported program ratios (e.g., classifying a larger share of joint activities to programs or reclassifying some fundraising costs as joint costs). Tinkelman (2009) examines data from the Avon Products Foundation breast cancer fundraising walks from the period 1998 to 2006 and finds that the organization began questionable joint cost allocation practices in 2002. These practices, which resulted in improved program ratios, began in the same period that one of the top charity watchdog monitors tightened its guidelines for "good" program ratios.

Furthermore, Parsons et al. (2011) conduct a survey of nonprofit executives and report that twenty percent of executives admit to having changed an allocation of shared costs at the end of the year to improve their program ratios. Another thirteen percent admit that they would be willing to alter shared cost allocations. Finally, thirty-five percent of managers admit to choosing their shared cost allocation methods based on whatever methods allow them to meet targeted program ratios.

3.4.3 Telemarketing Expenses

Comparing nonprofit financial reports to state telemarketing campaign reports, Keating et al. (2008) find that twenty-seven percent of the nonprofit organizations in their sample appear to improperly net telemarketing expenses against telemarketing campaign contributions. An additional nine percent allocate a portion of these expenses to an expense category other than

fundraising despite the limited circumstances under which this practice is considered appropriate. Both practices result in improved program ratios.

3.4.4 Strategic Operating Decisions

In the same survey mentioned above, Parsons et al. (2011) find that thirty-five percent of nonprofit executives admit to having changed an operating spending decision to improve their program ratios. When asked to identify spending that they felt their organizations needed to make but did not for fear of reporting undesirable efficiency ratios, twenty percent of managers noted changing their plans to hire administrative staff. Seventeen percent mentioned bypassing computer system upgrades, fourteen percent avoided training their staff, and thirteen percent avoided purchases of management or accounting software. Other spending choices noted included reduced spending for grant writers and health care.

Also noted above, Jones and Roberts (2006) find that nonprofits use both the level of joint costs and the share of joint costs allocated to programs to manage their program ratios. Actions that result in changes to the share or level of joint costs can involve not only accounting changes but also "real" strategic changes to program and/or fundraising activities (e.g., altering mailings to include program-related content in addition to fundraising-related content or altering mailings to include more program-related content per joint mailing) (Jones and Roberts 2006). Finally, Tinkelman (2009) reports that in addition to changing their breast cancer fundraising walks' joint cost allocation practices in 2002, Avon also made operational changes to it walks beginning that year. Some of these operational changes included reducing the number of walks each year, hiring a lower cost event producer, and reducing the walks from three to two days. These changes helped the organization improve its reported program ratios, but reduced total revenues, and therefore the funds available for cancer research.

3.4.5 The Interaction between Alternative Means of Program Ratio Management

Since reported expenses are the result of both strategic operational decisions and accounting practices, nonprofit managers can use either or a combination of the two to manage the reported program ratio. Prior studies provide evidence that some nonprofit organizations use both tools to manage their program ratios. As noted in previous sections, beginning in 2002 Avon management made changes both to the way its breast cancer walks' joint costs were allocated (an accounting practice) and to how, where, and when the walks were held (operational decisions). Both of these types of changes were likely made with the intent of improving Avon's reported program ratios (Tinkelman 2009). In addition, Parsons et al. (2011) find that managers who have changed an allocation of shared costs at the end of the year in the past to improve their organization's program ratio (an accounting practice) are more likely to change operating activities in the future to improve the program ratio (operational decisions).

3.5 Potential Costs of Program Ratio Management

Although the pay-offs from engaging in program ratio management can be high (more donations, higher executive compensation, better watchdog ratings, etc.), such behavior is not without its costs. As Hager (2003a, 51) points out, nonprofits may "win in the short run, [but] the bigger picture points to a variety of losers."

3.5.1 Nonprofits Themselves

Misaccounting for expenses results in managers and boards of directors not having a clear picture of the actual costs of fundraising, administration, and programs (Hager 2003a; Hager 2003b). Without accurate information, managers and boards may make poor strategic decisions for their organizations. Additionally, when organizations make operational changes in order to improve their program ratios, they do so at the risk of diminished organizational

effectiveness. As noted previously, when Avon made operational changes to its cancer walks these changes helped the organization meet its charity monitoring guidelines for "good" program ratios but resulted in far fewer dollars raised for cancer research (Tinkelman 2009). Also, Hager et al. (2004), in conducting detailed studies of nine nonprofit organizations, find that nonprofits that spend too little on organizational infrastructure (fundraising, information technology, accounting, physical plant, and human resources) are less effective at carrying out their missions than nonprofits that spend a more reasonable amount on infrastructure. Finally, Jones and Roberts (2006) point out that nonprofits that report dramatic changes in program ratios relative to the previous year may raise the suspicions of charity watchdog agencies or regulators.

3.5.2 Researchers and Policymakers

Researchers and policymakers use nonprofits' reported numbers to better understand and assess the nonprofit sector (Hager 2003b). Research that is based on inaccurate expense information or that is based on expense activity that deviates from normal operating practices is flawed, and public policy decisions based on this research may not turn out to be in the public's or the sector's best interests (Hager 2003a).

3.5.3 Donors

For donors who rely on the reported program ratios when making donation decisions, managed numbers can lead to inefficient resource allocation; i.e., donor resources being used in ways that are not in the best interests of the donors' communities (Jones and Roberts 2006; Krishnan et al. 2006; Hager 2003a). If the donors had access to information on the unmanaged ratios, they may have decided to support another organization where their resources would presumably have been used more efficiently (Jones and Roberts 2006).

3.6 Do Donors See Through Program Ratio Management?

Prior research provides mixed results regarding donors' abilities to disentangle program ratio management. Relying on models from prior research that find donors are sensitive to reported program ratios, Yetman and Yetman (2011b) provide evidence that donors place less weight on the program ratio when making donation decisions for organizations that report zero fundraising expenses compared to those that report positive amounts for fundraising. These results suggest that donors are able to at least partially see through the zero fundraising expense form of program ratio management.

Both Tinkelman (1998) and Khumawala et al. (2005) examine donors' reactions to joint cost allocations, which industry observers widely believe are manipulated to disguise fundraising costs as program costs. Tinkelman (1998) addresses this issue by examining the relationship between various types of donations and the program ratio adjusted to include all joint costs in fundraising expenses. His tests reveal that corporate and foundation donors are skeptical of joint cost allocations, penalizing those organizations that report high levels of joint costs as program expenses. Individual donors, on the other hand, do not consider joint cost allocations in their donation decisions, and accept the reported program ratio amounts at face value. Khumawala et al. (2005) use an experiment involving both sophisticated and unsophisticated donors to examine donors' reactions to joint cost allocations. They find that both groups of donors appear to ignore the effects of joint costs in making their donation decisions.

Finally, Flynn (2003) uses an experiment to examine donors' reactions to shared cost allocations. He finds that even when the statement of functional expenses contains signs of potentially manipulative allocations, such as an unusually large percentage of officers' and directors' compensation allocated to program expense, donors still base their giving decisions on

the reported program ratio amounts. His results suggest that nonprofit organizations' attempts to manage the program ratio using shared cost allocations may go undetected.

3.7 Factors that Mitigate or Limit the Likelihood of Program Ratio Management Behavior

Prior studies have investigated factors that may mitigate or limit program ratio management. Results from Krishnan et al. (2006) indicate that the passage of SOP 98-2 and the use of an outside accounting firm reduce the probability that a nonprofit will report zero fundraising expenses.[29] In addition, larger organizations and organizations with less pressing financial needs are less likely to report zero fundraising expenses. Keating et al. (2008) provide evidence that larger organizations, organizations with more accounting sophistication, and those with more outside monitoring are less likely to inappropriately net telemarketing expenses against contributions. These include organizations that use accrual accounting, receive restricted contributions, pay more in total executive salaries, are audited, have higher leverage, and are organized as 501(c)(3) entities.

Trussel (2003) finds that nonprofits with certain financial characteristics are less likely to manage the program ratio. These financial characteristics include higher surplus margins, more deferred expense, less depreciation allocated to programs, more deferred revenue, and lower changes in the program ratio. The Parsons et al. (2011) survey results of nonprofit executives suggest that larger organizations, those in which an accountant holds the top financial position, and those with more experienced managers are less likely to manage the program ratio. Krishnan and Yetman (2011), in examining program ratio management in California hospitals, find that older and larger hospitals, those with smaller boards and higher board compensation, those that

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[29] Unlike Krishnan et al. (2006), Jones and Roberts (2006) do not find that the passage of SOP 98-2 positively impacted nonprofit financial reporting quality.

use an independent accountant, and those that are less dependent on donations are less likely to manage their program ratios.

Yetman and Yetman (2011a) find that various governance mechanisms mitigate the tendency for nonprofits to understate fundraising or administrative expenses. These mechanisms include non-outsourced management, larger boards, undergoing a financial statement audit, undergoing an A-133 audit rather than a standard audit, more donor-imposed restrictions on their assets, issuing municipal bonds, engaging in taxable activities, and location in states with higher levels of state regulation and reporting requirements and higher levels of state enforcement of nonprofit laws and regulations. Using data from the redesigned 2008 IRS 990, they also find that having an audit committee, adopting written policies regarding document destruction, conflict of interest, and whistleblower protection, having a higher percentage of independent board members, and providing a copy of IRS 990 to the board of directors for review result in decreased likelihood of underreporting fundraising or administrative expenses. Additionally, larger organizations, older organizations, and more financially robust organizations are less likely to underreport non-program expenses. Overall, their results suggest that enhanced monitoring and oversight in the nonprofit sector can improve nonprofit reporting.

As the above studies demonstrate, currently much is known about organizational and financial characteristics as well as corporate governance mechanisms that appear to limit program ratio management. However, less is understood about whether and how audit-related factors constrain program ratio management and thus, improve financial reporting quality. While results of these past studies suggest that undergoing an audit in general mitigates the tendency to engage in program ratio management, these past studies leave many questions unanswered related to the role specific audit-related factors may play in this process. In fact, little is known

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regarding the relationships between audit-related factors and reporting quality in general in nonprofit organizations. Yetman and Yetman (2011a) examine the effect of auditor size on various measures of NPO program expense accuracy and Krishnan and Schauer (2000) examine auditor size and compliance with GAAP reporting requirements. Yetman and Yetman (2011a) find inconsistent auditor size results across their different program expense accuracy measures and although Krishnan and Schauer (2000) find support for larger audit firms being associated with greater client compliance with reporting requirements, their study has significant limitations restricting the generalizability of their results.[30]

3.8 Foundations for This Study

My study will extend Yetman and Yetman (2011a) and Krishnan and Schauer (2000) by providing a more in-depth analysis of the monitoring effect of external auditors on reporting quality in nonprofits. The following two elements are central to my research study.

3.8.1 Audit Evidence from For-Profit Studies

The lack of research on the audit effect on financial reporting quality in nonprofits is in direct contrast to such research in the for-profit world, in which a significant body of academic literature examines the effects of audit-related factors on reporting quality, especially with respect to earnings management.[31] For example, both Becker et al. (1998) and Francis et al. (1999) find that the clients of Big 4 audited companies exhibit less aggressive earnings management behavior. Balsam et al. (2003) and Krishnan (2003) find that industry specialist auditors reduce earnings management by their clients. Myers et al. (2003) present evidence consistent with longer auditor tenure reducing earnings management and Johnson et al. (2002) find evidence of greater earnings management in short audit-firm tenures of two to three years

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[30] These limitations include a small sample size and examining only one type of nonprofit entity in one geographic location.
[31] For an extensive review of this literature, see Francis (2004) and DeFond and Francis (2005).

relative to audit-firm tenures of four to eight years and no evidence of increased earnings management for long audit-firm tenures of nine or more years compared to medium audit-firm tenures. Lee and Son (2009) find that audit report lag (the time between the fiscal year-end and the audit report date) is negatively associated with earnings management. Frankel et al. (2002), Ashbaugh et al. (2003), and Srinidhi and Gul (2007) find a negative association between audit fees and earnings management. Chan et al. (2008) find that firms reporting material internal control weaknesses under Section 404 engage in more earnings management than firms that do not report material internal control weaknesses. Finally, Cohen et al. (2008) and Bartov and Cohen (2009) demonstrate that accrual earnings management decreased after the passage of SOX. To summarize, the results from these studies suggest that the following audit-related factors are positively related to for-profit financial reporting quality: Big 4 auditors, specialist auditors, auditor tenure, audit report lag, audit fees, the absence of internal control weaknesses issues identified by auditors during the course of the audit, and the audit period following the passage of SOX.

3.8.2 Differences between the For-profit and Nonprofit Sectors

As noted in Chapter 2, several differences exist between the for-profit and nonprofit sectors, including differences in organizational goals, financial needs, organizational structure, accounting rules, financial reports, financial statement users, monitoring needs, audit market structure, and audit risk environments (Tate 2007; Lopez and Peters 2010; Vermeer et al. 2009a). Differences also relate to client assessments auditors provide as part of A-133 nonprofit audits as opposed to for-profit audits. Specifically, certain assessments are unique to A-133 audits.

3.8.3 Getting Started

In summary, in order to better understand the role various audit-related factors play in financial reporting quality with respect to program ratio management in the nonprofit sector, I rely on the following to develop the hypotheses presented in Chapter 4: (1) theories and findings from the for-profit literature regarding the relationships between audit-related factors and earnings management and (2) knowledge of the differences that exist between the two sectors which may lead to different results than those found in for-profit studies.

CHAPTER FOUR

HYPOTHESES DEVELOPMENT

Based on audit evidence from for-profit studies and known differences between the for-profit and nonprofit sectors, I expect some of the audit-related factors examined in the for-profit literature to have a similar effect on financial reporting quality in the nonprofit sector and others to likely have a different effect. I also expect to find that certain factors unique to A-133 audits may be associated with reporting quality in nonprofit organizations.

4.1 Similar Effect in Nonprofit Versus For-profit Sector

Specialization: A commonly used measure of audit quality in for-profit studies is auditor specialization. Specialization is based on training and practical experience gained from auditing in a particular industry (Lowensohn et al. 2007) and previous for-profit empirical literature generally finds a positive association between auditor specialization and financial reporting quality (Balsam et al. 2003; Krishnan 2003; Payne 2008). As Kwon (1996) notes, specialist auditors are better able to assess the reasonableness of their clients' financial representations and estimates, which reduces their clients' discretion in applying accounting principles, and results in increased reporting quality. A-133 audit requirements are both different and more extensive than audit requirements for for-profit financial statements audits (Tate 2009) and auditors of A-133 clients must obtain specialized training and expertise (Keating et al. 2005). Thus, I expect specialization to have a similar effect in the nonprofit sector as in the for-profit sector whereby audit firms with extensive experience with A-133 audits should be more likely to uncover and

reduce irregularities in their clients' financial reports. This leads to the following hypothesis (stated in the alternative form):

H1: There is a positive association between auditor specialization and nonprofit financial reporting quality.

New Auditor: Despite long-standing arguments that long auditor tenure may impair auditor independence, "there is little or no evidence that long tenure impairs audit quality" and "several studies find evidence consistent with short auditor tenure impairing audit quality" (DeFond and Francis 2005, 16). As noted by Johnson et al. (2002), a considerable amount of knowledge necessary to the audit is client-specific, including for example, knowledge of the client's business, accounting system, and internal control structure. The importance of this client-specific knowledge creates a learning curve for new auditors (Knapp 1991; DeFond and Francis 2005; Francis 2004; Johnson et al. 2002), the effect of which may result in a lower likelihood of detecting errors (Knapp 1991; Johnson et al. 2002; Myers et al. 2003). Thus, as for-profit studies indicate, financial reporting quality may be lower initially for new audit engagements while auditors acquire knowledge of the client (Francis 2004; DeFond and Francis 2005; Beck et al. 1988; Myers et al. 2003; Johnson et al. 2002). I expect a similar auditor learning curve effect in the nonprofit sector. Stated formally (in alternative form):

H2: There is a negative association between new auditors and nonprofit financial reporting quality.

Audit Fees: Prior for-profit studies suggest that, *ceteris paribus*, higher audit fees may imply higher audit quality through more audit effort (DeFond et al. 2000; Francis 2004; Srinidhi and Gul 2007). High auditor effort should result in a reduction of both intentional and unintentional reporting errors (Srinidhi and Gul 2007). Although audit fees for NPO audits tend to be lower than those for for-profit audits, I expect higher relative audit fees in the nonprofit

sector to be associated with higher audit effort and thus higher reporting quality. Stated formally (in alternative form):

> **H3**: There is a positive association between audit fees and nonprofit financial reporting quality.

Internal Control over Financial Reporting: For-profit studies suggest that weak internal controls over financial reporting can lead to lower financial reporting quality by creating more opportunities for earnings management (Chan et al. 2008; Doyle et al. 2007; Ashbaugh-Skaife et al. 2008), and prior research supports this assertion (Chan et al. 2008). I expect indications of a weak internal control environment in an NPO to similarly lead to reduced financial reporting quality. Stated formally (in alternative form):

> **H4**: There is a negative association between weaknesses in internal control over financial reporting and nonprofit financial reporting quality.

4.2 Different Effect in Nonprofit Versus For-profit Sector

Size: DeAngelo (1981) defines audit quality as the probability that an auditor will discover and report a breach in the client's accounting system. She hypothesizes that larger audit firms will provide higher quality audits due to having more resources to better train employees as well as to having more independence from their clients since they have a larger client base. Thus, based on her hypothesis, audits performed by larger audit firms are more likely to result in higher quality client financial reports and subsequent studies in the for-profit sector have generally found support for DeAngelo's (1981) theory (see for example, Geiger and Rama 2006, Francis et al. 1999, Becker et al. 1998, Colbert and Murray 1998, and Davidson and Neu 1993). Results from nonprofit studies using the traditional auditor size classification of Big 4 and non-Big 4 firms as a proxy for auditor quality, however, are not quite as consistent with this theory (See Tate 2007, Tate 2009, Vermeer et al. 2009b, Petrovits et al. 2011, and Yetman and Yetman

2011a). This suggests, then, that the Big 4/non-Big 4 designation may have different quality implications for nonprofit organizations than it does for for-profit corporations (Tate 2009). As a result of the following important differences between the for-profit and nonprofit audit environments, it is possible that the largest audit firms may not be the highest quality nonprofit audit providers.

First, nonprofits have a different risk structure in which there are no owners to whom auditors report, resulting in a very different litigation environment from for-profits (Tate 2009). The Big 4 audit approximately 85 percent of public companies (Francis et al. 2005; Petrovits et al. 2011) and face very high economic risks of litigation with their public clients. The lower litigation risk associated with audits of their nonprofit clients may result in lower audit rigor from Big 4 firms as they have "an incentive to shift their constrained audit resources to areas that entail greater litigation risk and away from those with lower litigation risk" (Lopez and Peters 2010, 484).

Next, as noted in Chapter 2, several studies reveal that the structure of the audit market is much different in the nonprofit sector than in the for-profit sector. Unlike the for-profit audit market which is dominated by the Big 4 firms, the majority of nonprofit audits are performed by smaller audit firms. Perhaps firms that specialize in the nonprofit sector would be better able to provide quality audits, rather than larger firms that perform fewer nonprofit audits.

Finally, Tate (2009, 29) notes that "many nonprofit organizations cannot afford to pay the significantly higher fees that larger audit firms must charge to recover their higher overhead costs" and Beattie et al. (2001) report that audit fees charged for nonprofit clients are typically lower than those charged for for-profit organizations of a similar size. As a result, the lower audit fees charged to Big 4 audit firms' nonprofit clients (compared to those charged for their public

company clients) may not only lead these firms to shy away from accepting nonprofit clients but also lead to reduced audit rigor for the nonprofit clients they do accept. Beattie et al. (2001, 256) suggests that "a lower 'market rate' for charity [nonprofit] audits might encourage audit firms to use less experienced staff and reduce audit time in trying to minimize losses incurred."

Given the two different perspectives on the effect of auditor size on nonprofit financial reporting quality, it is an empirical question whether and how auditor size is associated with nonprofit financial reporting quality. To provide evidence on this issue, I present the following hypothesis in null form:

H5: There is no association between auditor size and nonprofit financial reporting quality.

Audit Lag: In addition to higher audit fees, prior for-profit studies suggest that longer audit report lags (the time between the fiscal year-end and the audit report date) may indicate more auditor effort (Knechel and Payne 2001; Lee and Son 2009) and will result in a lower likelihood of earnings management (Lee and Son 2009). However, in the nonprofit sector in which there are no stringent SEC reporting deadlines and thus less pressure to complete the audit shortly after year-end, a long lag could merely indicate that the auditing firm contracted to perform the NPO audit outside the "busy season" when they audit their SEC clients or just closer to the end of the nine month reporting deadline. Given the two different perspectives on the association between audit lag and nonprofit financial reporting quality, I present the following hypothesis in null form:

H6: There is no association between audit lag and nonprofit financial reporting quality.

SOX: Research indicates that accrual earnings management decreased in the for-profit setting after the passage of SOX (Cohen et al. 2008; Bartov and Cohen 2009). This may be due in part to increased auditor scrutiny and vigilance after the passage of this act (Cohen et al.

2008). Although there could be potential audit spillover effects of SOX onto nonprofit audits, since most of the provisions of SOX, including PCAOB inspections, only apply to publicly-held companies (and their auditors), SOX may not have had the same effect on NPOs and their auditors and hence, NPO financial reporting quality. Given these two different perspectives on the association between SOX and nonprofit financial reporting quality, I present the following hypothesis in null form:

H7: There is no association between SOX and nonprofit financial reporting quality.

4.3 Factors Unique to A-133 Audits

As part of A-133 audits, auditors are required to provide assessments on whether or not there are instances of noncompliance with laws, regulations, contracts, or grant agreements that have a direct and material effect on the financial statements and whether or not the organization qualifies as a low-risk auditee. Additionally, A-133 audits require that auditors assess the organization's ability to continue as a going concern.[32] Although this going-concern assessment is not unique to A-133 audits, the relevant inputs auditors must consider in making this designation for their A-133 clients are likely quite different from those considered for their for-profit clients (e.g., uncertainty of future income from grants and donations). Tate (2007) and Vermeer (2008) note that assessments of material noncompliance and going concern issues could indicate a breakdown in nonprofit management stewardship. As managers have ultimate responsibility for ensuring accurate financial reporting, I expect indications of possible management reputational concerns to be negatively related to financial reporting quality. On the

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[32] As part of the A-133 audit, auditors are also required to provide an assessment on the organization's internal controls over major federal programs. However, because information on internal controls over major programs is not available in the electronic Single Audit database until 2001and my sample period begins in 1997, I run separate regression analyses including this variable in the models. Results of these analyses are presented in Chapter 8. Information on internal controls over financial reporting is available for all years.

other hand, I expect auditees identified as low-risk to be more likely to be positively associated with reporting quality as they are typically considered to be inherently less risky. This leads to the following hypotheses (stated in the alternative form):

H8: There is a negative association between material noncompliance with federal regulations and nonprofit financial reporting quality.

H9: There is a positive association between low-risk auditees and nonprofit financial reporting quality.

H10: There is a negative association between going concern assessments and nonprofit financial reporting quality.

CHAPTER 5

RESEARCH DESIGN AND VARIABLE MEASUREMENT

5.1 Empirical Model

Based on the discussion in Chapter 4, I estimate the effects of audit-related factors on

nonprofit financial reporting quality (FRQ) as follows:

$$FRQ_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} +$$
$$\beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} + \beta_9 ICFR_{it} + \beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} +$$
$$\beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} + \beta_{16} PROGCHG_{it} +$$
$$\beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it}$$
$$+ \varepsilon_{it} \tag{1}$$

Regression variables are defined below and summarized in Table 1.

5.2 Variable Measurement of Financial Reporting Quality (FRQ)

The dependent variable of interest, *FRQ*, is measured using several alternate

specifications. Specifically, I operationalize this variable three different ways using proxies

based on prior research related to nonprofit financial reporting quality (Baber et al. 2001; Trussel

2003; Krishnan et al. 2006; Yetman and Yetman 2011a). My first measure of financial reporting

quality, FRQ1, is a broad measure of financial reporting quality that encompasses the total effect

of managing expenses via any method in order to improve the program ratio. My second and

third measures of financial reporting quality, FRQ2 and FRQ3, on the other hand, are more

focused measures that directly attempt to measure financial reporting quality via two specific

accounting actions undertaken to manage the program ratio (reporting zero fundraising or zero

administrative expenses, respectively).

FRQ1 – Abnormally High Program Ratio: The first measure of financial reporting quality is based on Trussel (2003) who defines potential nonprofit accounting manipulators as those with abnormally high program ratios as estimated from a regression specification. Overstated program ratios are the result of expenses being shifted away from the fundraising and/or administrative categories and toward the programs category (Yetman and Yetman 2011a), actions which lower the quality of financial reporting. Trussel (2003) identifies these potential accounting manipulators by using a regression model that is adapted from Baber et al. (2001) and that estimates an organization's program ratio given its size, organizational fundraising strategy, charitable objective, and year:

$$\underline{\frac{PGMEXP_{it}}{TOTEXP_{it}}} = \lambda_0 + \lambda_1 SIZE_{it} + \lambda_2 \underline{\frac{PROFFEES_{it}}{TOTEXP_{it}}} + \lambda_3 \underline{\frac{FUND_{it}}{CONT_{it}}} + \lambda_4 TYPE_{it} + \lambda_5 YEAR_{it} + \varepsilon_{it} \qquad (2)$$

where:

PGMEXP	=	program expenses for organization i in year t;
TOTEXP	=	total expenses for organization i in year t;
SIZE	=	natural log of total revenues for organization i in year t;
PROFFEES	=	professional fundraising expenses for organization i in year t;
FUND	=	total fundraising expenses for organization i in year t;
CONT	=	total contributions for organization i in year t;
TYPE	=	four dummy variables which classify observations into the five major subsectors of nonprofits established by the National Center for Charitable Statistics (NCCS)[33],[34]; and
YEAR	=	eleven indicator variables which represent the years 1997-2008.

[33] The National Center for Charitable Statistics (NCCS) is "the national repository of data on the nonprofit sector in the United States. Its mission is to develop and disseminate high quality data on nonprofit organizations and their activities for use in research on the relationships between the nonprofit sector, government, the commercial sector, and the broader civil society. Working closely with the IRS and other government agencies, private sector service organizations, and the scholarly community, NCCS builds compatible national, state, and regional databases and develops uniform standards for reporting on the activities of charitable organizations." (http://nccs.urban.org/about/index.cfm).

[34] The NCCS classifies nonprofits into five major subsectors based on the first digit of the organization's National Taxonomy of Exempt Entities (NTEE) code. The NTEE is a classification system for nonprofit organizations that are recognized as tax-exempt under the Internal Revenue Code. It was developed by the NCCS. The five major subsectors of nonprofits include (1) arts, culture, and humanities; (2) education; (3) health; (4) human services; and (5) "other." The "other" category includes the following groups of nonprofit organizations: environment, international, mutual benefit, public and societal benefit, religion, and "unknown." These nonprofit subsector groupings are similar to industry groupings in the for-profit sector.

As noted by Baber et al. (2001), the program ratio varies inversely with the extent that contributed resources are consumed by fundraising and administrative activities. Thus, per Baber et al. (2001), size is included in the regression to control for reputation with the expectation that marginal fundraising costs will be less for well-known, larger organizations and that larger organizations will experience economies of scale with respect to fundraising and administrative activities. Type of organization is included as the costs of fundraising and administration are expected to vary according to charitable objective. Baber et al. (2001) provides the example that the costs of administering social programs in various geographic locations are likely to be greater than the costs of administering medical research in which the activities are centered in one geographic location. They also note that prior studies (Posnett and Sandler 1989 and Weisbrod and Dominguez 1986) find that the willingness of donors to contribute time and money depends partially on the objective of the organization, which in turn affects the relative costs of fundraising and administration. Professional fundraising expenses divided by total expenses and fundraising expenses divided by contributions are included to control for the organization's fundraising strategy, with the expectation that there will be a positive association between each of these measures and an organization's strategy of identifying and soliciting donations from relatively small as opposed to large donors. Per Trussel (2003, 632), "the strategy of reaching relatively small donors requires more costly methods of marketing, leaving less to spend on programs." Year indicator variables are included to control for time effects. I remove observations lacking required data.

The model to estimate FRQ1 is significant and explains over nine percent of the variation in the program ratio, which is similar to previous results using this model (Trussel 2003; Baber et al. 2001). Consistent with Trussel (2003), I use the residuals from this model as an indicator of

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whether an organization has an abnormally high program ratio. Positive standardized residuals are related to higher than expected program ratios and organizations with standardized residuals greater than zero at the ten percent level (one-tailed) are classified as potential accounting manipulators.[35] FRQ1 is set to zero for observations that fall into this category and one otherwise, indicating that this measure is increasing in financial reporting quality.

FRQ2 - Zero Fundraising Expense: My second measure of financial reporting quality comes from Krishnan et al. (2006) and Yetman and Yetman (2011a). These two papers as well as Wing et al. (2006) note that a large number of nonprofits report zero fundraising expenses when in fact they should plausibly be reporting non-zero amounts. These underreported fundraising expenses likely end up as overstated program expenses, causing the program ratio to be overstated and lowering the quality of financial reporting (Yetman and Yetman 2011a; Yetman and Yetman 2011b). Consistent with Krishnan et al. (2006), Yetman and Yetman (2011a), and Yetman and Yetman (2011b), I remove observations which have plausible reasons for reporting zero fundraising expenses, including organizations that have fundraising as their primary purpose, affiliated organizations, and organizations with less than $10,000 in private donations.[36] Per Yetman and Yetman (2011b, 19), affiliated organizations should be removed as it is possible that one organization could fundraise or provide administrative services on behalf of another and organizations which have fundraising as their main objective should be removed "as these organizations could classify those [fundraising] expenses as charitable [program] rather than fundraising." Finally, organizations with less than $10,000 in private donations should be

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[35] For robustness, I examine additional percentage cut-off levels including fifteen, thirteen, twelve, and nine percent. Results using these alternative levels are largely consistent with the main results presented in Chapter 7.

[36] I also examine the private donations threshold of $50,000 as suggested by Wing et al. (2006) as well as the thresholds of $1 and $100,000. Analyses of results using these alternative thresholds are presented in Chapter 8.

removed as it is feasible that this amount could be raised with no fundraising effort.[37] From the remaining observations, FRQ2 is set to 0 if an organization reports zero fundraising expenses and 1 otherwise. Thus this measure is increasing in financial reporting quality.

FRQ3 - Zero Administrative Expense: My third measure of financial reporting quality also comes from Yetman and Yetman (2011a). This paper along with Wing et al. (2006) and Pollak et al. (2002) note that many nonprofits report zero administrative expenses when they plausibly should report non-zero amounts. Steinberg (1986) argues that it is impossible to convert revenues to charitable output without some administrative expense. As with underreported fundraising expenses, underreported administrative expenses likely end up as overstated program expenses, causing the program ratio to be overstated and lowering the quality of financial reporting (Yetman and Yetman 2011a). After removing affiliated organizations, FRQ3 is set to 0 if an organization reports zero administrative expenses and 1 otherwise.[38] Thus this measure is increasing in financial reporting quality.

5.3 Variable Measurement of Audit-Related Factors

The independent variable measures discussed below are the main measures used in my analysis. However, I also use a series of alternative measures which are discussed and tested in Chapter 8.

I define auditor size (*AUDSIZE*) using the traditional Big 4/Non-Big 4 designation. The Big 4 category includes the largest accounting firms during the sample period. This category includes NPOs audited by Deloitte & Touche, KPMG, Ernst & Young, PricewaterhouseCoopers (Price Waterhouse or Coopers & Lybrand), and Arthur Andersen. This variable is coded 1 for a

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[37] This threshold minimum is limited to private donations as Krishnan et al. (2006) note that the other two types of donations (government grants and federated fundraising donations) can often be raised with little fundraising effort.
[38] For the reason listed above, I remove organizations that are affiliated as these organizations could feasibly report zero administrative expenses.

Big 4 auditor and 0 otherwise. As noted in Chapter 4, given the important audit environment differences between for-profit and nonprofit organizations that may affect the level of audit quality offered by larger audit firms to their nonprofit clients, I do not make a directional prediction for the association between auditor size and nonprofit financial reporting quality.

Consistent with Tate (2007), my measure of auditor specialization (*SPECIAL*) is based on the number of audits performed by each audit firm at the state level. I look at specialization on the state rather than the national level as Francis et al. (2005) argue that firms specialize on a local rather than on a national level. Following Tate (2007), I calculate the percentage of audits performed by each audit firm within each state to determine the A-133 specialists within each state. Audit firms performing at least five percent of the audits within each state are considered specialists and all others are considered non-specialists. This variable is coded 1 for a specialist auditor and 0 otherwise. In order to derive more objective (i.e., externally valid) measures of specialization, I use all available observations in the Federal Audit Clearinghouse Single Audit database to calculate the *SPECIAL* variable (instead of calculating the percentage as five percent of only the organizations used in my sample). As in for-profit studies, I predict a positive relationship between specialist auditors and financial reporting quality.

Familiarity with the client is measured by the variable *NEW*. Consistent with Lopez and Peters (2010) and Tate (2009), this variable takes a value of 1 if a different auditor performed the previous year's audit or if this is the first year that the NPO is included in the database after 1997 and 0 otherwise. Consistent with studies in the for-profit sector, I expect that newly acquired auditors will be less likely to be associated with financial reporting quality.

Accounting expenses reported on the 990 are used to proxy for audit fees (*FEES*), consistent with Tate (2007) and Pearson et al. (1998).[39] Similar to for-profit studies, I predict that audit fees will be positively associated with financial reporting quality. *LAG* represents audit lag and is defined as the number of days between the fiscal year-end and the audit report date. *SOX* takes a value of 1 if the audit year is 2002 or later and 0 otherwise. Given the competing theoretical arguments mentioned in Chapter 4 with respect to the effect of audit lag and SOX on nonprofit engagements, it is an empirical question whether these two variables are associated with nonprofit financial reporting quality. As a result, I do not make a directional prediction as to the effect of audit lag or SOX on nonprofit reporting quality.

The internal control over financial reporting (*ICFR*) variable takes a value of 1 if the auditors noted any reportable conditions in internal controls over financial reporting on the SF-SAC form and 0 otherwise. Consistent with for-profit studies, I expect this variable to be negatively associated with financial reporting quality in the nonprofit sector. The audit assessment variables unique to A-133 audits that I test include (1) if the auditor deems the organization to be a low-risk auditee (*LOWRISK*), (2) if the auditor discovered instances of noncompliance with federal programs that are material to the financial statements (*MNC*), and (3) if a going-concern explanatory paragraph is included in the financial statement opinion (*GC*). These variables take a value of 1 if, on the SF-SAC form, the auditors responded "Yes" to whether the item exists and 0 if "No." I predict that auditor risk assessment of an organization as low is positively associated with financial reporting quality and that the other two unique A-133 assessment variables are negatively associated with financial reporting quality.

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[39] The amount reported on the 990 for accounting expenses includes the total accounting and auditing fees paid to external accountants.

5.4 Control Variables

In addition to the variables above, I include financial performance and organizational variables found in prior research to be related to nonprofit financial reporting quality (Trussel 2003; Krishnan et al. 2006; Keating et al. 2008; Yetman and Yetman 2011a).[40] These include surplus margin (MARGIN), deferred expenses ratio (DEFEXP), growth (GROWTH), depreciation allocated to programs (DEPPROG), deferred revenues ratio (DEFREV), program spending ratio change (PROGCHG), size (SIZE), age (AGE), and donations intensity (DONINT). Trussel (2003) finds that lower surplus margins, less deferred expense, more depreciation allocated to programs, less deferred revenue, and higher changes in the program spending ratio are associated with the likelihood of accounting manipulation. Thus, I expect positive coefficients for *MARGIN, DEFEXP,* and *DEFREV* and negative coefficients for *DEPPROG* and *PROGCHG*. Prior research is mixed in regard to growth (Trussel 2003; Yetman and Yetman 2011a) and donations intensity (Trussel 2003; Yetman and Yetman 2011; Krishnan and Yetman 2011), thus I make no prediction on direction for *GROWTH* or *DONINT*. I expect a positive coefficient for *SIZE*, consistent with Yetman and Yetman (2011a), Krishnan et al. (2006), Keating et al. (2008), and Krishnan and Yetman (2011), who find that larger nonprofits are less likely to misreport financial information to improve the program ratio. I also expect a positive coefficient for *AGE*, consistent with Yetman and Yetman (2011a) and Krishnan and Yetman (2011) who find that more established nonprofits are less likely to overstate the program ratio.

I also include a variable (STATEGOV) to control for the level of state governance of NPOs. As noted in prior literature (Fisman and Hubbard 2005; Irvin 2005; Desai and Yetman

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[40] I recognize that certain board and audit committee characteristics may be related to nonprofit financial reporting quality. However, unlike in the for-profit setting where such information is easily available, nonprofit board and audit committee data are very limited.

2006; Keating et al. 2008; Yetman and Yetman 2011a), there is a great deal of variation across states in their regulation of NPOs. A primary purpose of such regulation is to prevent asset misuse and financial misreporting (Desai and Yetman 2006; Yetman and Yetman 2011a). Following prior research (Desai and Yetman 2006; Yetman and Yetman 2011a), I use an index of seventeen state reporting requirements and laws to measure the strength of state governance of NPOs. I expect to find a positive association between strength of state governance and financial reporting quality.

As noted in Behn et al. (2008, 332), "auditor choice is an endogenous decision for each client." As a result, the factors that determine an organization's choice of auditor may also influence my study's dependent variables. Thus, consistent with prior studies (Behn et al. 2008; Kitching 2009; Lopez and Peters 2010; Krishnan 2003), I implement the Heckman (1979) two-step method to address this concern. This method involves estimating a model for auditor selection, followed by the insertion of the inverse Mills ratio (INVMR) (calculated from the auditor selection model) into the second model of interest (Bushway et al. 2007).[41] Finally, I include industry indicator variables (*INDUSTRY*) to control for industry effects. As in Keating et al. (2008), I classify observations into the five major subsectors of nonprofits assigned by the NCCS.

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[41] In the first step, I run a probit regression for nonprofit auditor selection based on the model used in Kitching (2007) and Kitching (2009). The model is:

$AUDITOR = \alpha_0 + \alpha_1 DEBT + \alpha_2 SIZE + \alpha_3 RCI + \alpha_4 PROF + \alpha_5 DUES + \alpha_6 INDSUP$

The model is significant with a pseudo R^2 of 19.32. Using the results of this regression, I compute the inverse Mills ratio and include this variable in all of my FRQ models. The factors used in the nonprofit auditor choice model are defined in Appendix C.

CHAPTER 6

SAMPLE SELECTION AND DATA

My sample covers the fiscal years 1997 through 2008 and the data for my study are

obtained from two sources: (1) the A-133 Single Audit database available from the Federal

Audit Clearinghouse (FAC) and (2) the IRS Statistics of Income (SOI) file obtained from the

National Center for Charitable Statistics (NCCS).[42] I begin with 1997 as this is the year the

Single Audit database was created and I end with 2008 as this is the most recent year available in

the SOI file.

The A-133 database includes general auditee and auditor information, type of audit

performed (single audit or program-specific audit), amount of federal awards expended, and

audit results as reported on the Form SF-SAC (Petrovits et al. 2011).[43] After examining the data,

I find that a major cleanup of the auditor name field is needed in order to correctly determine

several of my audit-related variables (AUDSIZE, SPECIAL, and NEW). Particular issues I noted

were non-standardization of audit firm names across the database, misspellings of audit firm

names, incorrect completion of the CPA firm field, and audit firm name changes. For example,

(1) an audit firm may appear in the database as "Deloitte & Touche," "Deloitte & Touche LLP,"

"Deloitte and Touche LLP," "Deloitte", or "D&T"; (2) the audit firm Ernst & Young may be

spelled "Ernest & Young", "Enrst & Young", "Earnst & Young", or "Ernst & Yound"; (3) an

individual auditor's name rather than his or her associated CPA firm is inserted into the CPA

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[42] The FAC data is available at http://harvester.census.gov/sac at no cost and the SOI data is available for a fee from
http://nccsdataweb.urban.org.
[43] A program-specific audit is an audit of an individual federal program (rather than a single audit of an entity's
financial statements and federal programs). This type of audit may be elected by the auditee if federal awards were
expended under only one federal program.

firm name field; and (4) a firm may appear in the database as Johnson Johnson Brown & Smith

LLC in one year and as Johnson Brown & Smith LLC in the next year while retaining the same

address and phone number. In order to more precisely determine the aforementioned auditor

variables, I attempt to clean the entire database (which includes over 200,000 nonprofit

observations) of these and other issues. I chose to clean the entire database, rather than just the

data in my dataset, in order to derive more objective (i.e., externally valid) measures of

specialization, as noted in Chapter 5. This process involved the use of statistical software as well

as visual inspection of the data in order to make both computer-assisted and manual corrections.

The SOI data is available from tax years 1982-2007 (with the exception of 1984) and

includes a sample of Internal Revenue Code 501(c) (3) organizations but excludes private

foundations.[44] These data files are produced annually using information from organizations'

Form 990s and include more than 300 financial and nonfinancial variables. The NCCS carefully

cleans this database for errors and as such it is considered the most reliable dataset available

from the NCCS (Jones et al. 2010; Kitching 2009). Per Yetman and Yetman (2011a), although

the population of nonprofits includes approximately 300,000 organizations and the SOI database

includes approximately only 12,000 nonprofits yearly, due to size-weighted sampling, this

database encompasses over 90 percent of all nonprofit revenues and assets.[45] The FAC audit data

is merged with the SOI 990 financial data using EIN (employer identification number) and fiscal

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[44] The year on the Form 990 (its tax year) corresponds to the year in which the fiscal year begins. However, the
FAC database considers the fiscal year to be the year in which the fiscal period ends. This study will refer to the
fiscal year of an organization as the year in which the fiscal period ends.

[45] According to the NCCS' *Guide to Using NCCS Data* (http://nccsdataweb.urban.org/kbfiles/742/NCCS-data-
guide-2006c.pdf), the SOI files include all large 501(c)(3) organizations (defined as $30 million or more in assets
and $10 million before 2000) plus a random sample of smaller organizations stratified and weighted by asset level
that is selected to represent the entire universe of nonprofit organizations. Per Jones et al. (2010), in discussions with
an IRS representative, once an organization is included in the SOI database it remains there regardless of size.

year.[46] The merged dataset, after deletion of observations missing control variables, includes 29,821 observations representing 5,001 unique organizations. Not all of the merged observations are used in each empirical model because of differing data screens and requirements, as previously discussed. Table 2 details the sample selection process.

Consistent with prior research (Krishnan et al. 2006; Keating et al. 2008; Francis and Yu 2009; Tate 2007; Tate 2009; Reichelt and Wang 2010; Yetman and Yetman 2011a), all analyses are estimated with clustered robust standard errors as suggested by Rogers (1993) to correct for serial dependence and heteroscedasticity. To determine if multicollinearity is a significant concern, I calculate variance inflationary factors in each of the models as well as eigenvalues. Finally, I winsorize all non-indicator variables at the 1 and 99 percent levels to reduce the effects of extreme values on the test results.

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[46] Several prior studies use financial information reported in 990s because audited financial statements of nonprofits (including those required by the Single Audit Act) are not generally available (e.g., Yetman and Yetman 2011a; Petrovits et al. 2011; Kitching 2009; Vermeer 2008; Vermeer et al. 2009a; Tate 2007; and Keating et al. 2005). Although the 990 is not audited, it is reasonable to assume that the 990 and audited financial statement numbers are similar, as the effects of an audit will presumably spill over from the audited financial statements to the 990 (Yetman and Yetman 2011a). Additionally, Pollak et al. (2002, 6), who conducted a large scale survey of NPOs that had their financial statements audited, found that most Form 990s were prepared by the same firm which had conducted the audit and note that "one would expect the Form 990 to reflect the auditor's judgment on the reasonableness of the functional expense allocation" (which is the focus of my study).

CHAPTER 7

MAIN EMPIRICAL RESULTS

7.1 Descriptive Statistics and Univariate Analysis

Table 3 provides the descriptive statistics for the full dataset. A total of 95.6 percent of

the sample are not identified as being in the potential program ratio manipulator category

(FRQ1=1) as defined by Trussel (2003), 77.3 percent report non-zero amounts of fundraising

expense (FRQ2=1), and 96.5 percent report non-zero amounts of administrative expense

(FRQ3=1).[47] Regarding the audit-related variables, 35.2 percent of the sample is audited by one

of the Big 4 firms (AUDSIZE) and 19.5 percent of the sample is audited by a specialist firm

(SPECIAL). Approximately 14 percent of the sample is audited by a new auditor (NEW),

average accounting fees (FEES) are almost $84,000, the average number of days between an

organization's year end and its audit report date (LAG) is 227 days (or 7.45 months), and about

63 percent of the observations fall in the post-Sarbanes-Oxley Act period (SOX). Auditors

deemed 71.7 percent of the organizations in the sample as low risk auditees (LOWRISK), less

than 1 percent of the observations received going-concern (GC) explanatory language in their

financial statement opinions, almost 14 percent of the sample was identified to have reportable

conditions over financial reporting (ICFR), and in less than 2 percent of the sample were

instances of material noncompliance with federal programs (MNC) identified.

Among the control variables, the average surplus margin (MARGIN) is 4.9 percent, the

average deferred expenses ratio (DEFEXP) is 5.7 percent, the average percent change in

revenues from the prior year (GROWTH) is 8.3 percent, the average rate at which a nonprofit in

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[47] These percentages are consistent with prior research (Trussel 2003; Yetman and Yetman 2011a).

the sample is depreciating its assets allocated to programs (DEPPROG) is 8.4 percent, the average deferred revenues ratio (DEFREV) is 2.5 percent, and the average change in the program ratio from the prior year (PROGCHG) is less than 1 percent. The mean age (AGE) for the sample is approximately 38 years, the average ratio of total donations to total revenues (DONINT) is 13.9 percent, and average revenues (SIZE) of organizations in the sample are approximately $22.8 million (natural log is $16.944 million).[48] Additionally, the average organization in the sample is subject to approximately 11 nonprofit reporting requirements and laws in its state (STATEGOV).

Panel A of Table 4 presents the sample frequencies by major nonprofit sub-sector and Panel B presents the sample frequencies by year. Table 5 presents two-way tabulations of the three FRQ variables. First, out of the 23,359 observations that report non-missing values for both FRQ1 and FRQ2, 351 (1.50%) are commonly classified as likely having low financial reporting quality (FRQ1=0 and FRQ2=0). Next, out of the 27,469 observations that report non-missing values for both FRQ1 and FRQ3, 469 (1.71%) are commonly classified as likely having low financial reporting quality (FRQ1=0 and FRQ3=0). Lastly, out of the 23,428 observations that report non-missing values for both FRQ2 and FRQ3, 172 (0.73%) are commonly classified as likely having low financial reporting quality (FRQ2=0 and FRQ3=0). Finally, untabulated results indicate that out of the 23,357 observations that report non-missing values for FRQ1, FRQ2, and FRQ3, 147 (0.63%) are commonly classified as likely having low financial reporting quality (FRQ1=0, FRQ2=0, and FRQ3=0).

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[48] The average ratio of total donations to total revenues (donation intensity) is fairly low in my sample due to the fact that a large percentage of my sample is made up of colleges and hospitals which are highly reliant on program service revenue. Additionally, because my sample consists of organizations that receive large amounts of federal funding, most of these organizations have significant amounts of government grant revenue or program service revenue from federal contracts.

Univariate analysis in Table 6 indicates that companies with lower financial reporting quality (FRQ1, FRQ2, or FRQ3 = 0) are significantly different on most attributes from companies with higher financial reporting quality (FRQ1=1, FRQ2=1, and FRQ3=1). For the FRQ1 sample, companies with higher financial reporting quality (those not identified by the Trussel method as potential accounting manipulators) are more likely to be audited by a BIG 4 or specialist firm, to pay higher accounting fees, to have a longer audit lag, to fall in the post-SOX era, to be considered low risk auditees, and to be associated with a reportable condition over financial reporting. For the FRQ2 sample, companies with higher financial reporting quality (those not reporting zero fundraising expenses) are more likely to be audited by a BIG 4 or specialist firm, to pay higher accounting fees, to fall in the post-SOX era, and to be considered low risk auditees and are less likely to be audited by a new auditor, to receive a going concern explanation, to be associated with a reportable condition over financial reporting, and to be identified with material noncompliance with federal programs. For the FRQ3 sample, companies with higher financial reporting quality (those not reporting zero administrative expenses) are more likely to be audited by a BIG 4 or specialist firm, to pay higher accounting fees, to have a longer audit lag, to fall in the post-SOX era, to be considered low risk auditees, and to be associated with a reportable condition over financial report and are less likely to receive a going concern explanation and to be identified with material noncompliance with federal programs.

Table 7 reports the Pearson correlations for the variables of interest in this study. The results indicate that organization size is highly correlated with usage of a Big 4 auditor, age, and accounting fees (0.549, 0.427, and 0.501, respectively). Accounting fees are also highly correlated with usage of a Big 4 auditor (0.380) as is revenue growth with the surplus margin (0.354). Additionally, the inverse Mills ratio is highly correlated with several variables.

Correlations among all other variables are generally small. An analysis of the variance inflationary factors (VIFs) for each model reveals that all are well below the commonly recommended 10.00 threshold (Berenson et al. 2009). In addition, principal components analysis (PCA) indicates that the smallest eigenvalue of the correlation matrix is 0.1147, well above the suggested 0.05 level (Hocking 1996). Together, these results indicate that multicollinearity is not a serious concern.

7.2 Multivariate Analysis

Table 8 reports the Model 1 logistic regression results for the three alternative specifications of nonprofit financial reporting quality (FRQ). Positive (negative) coefficients indicate increasing (decreasing) likelihood of high financial reporting quality. All three models are statistically significant at the $p < 0.01$ level and all coefficient p-values are reported as two-tailed probabilities.

7.2.1 FRQ1 - Abnormally High Program Ratio

Column one of Table 8 presents the results for the FRQ measure based on the Trussel (2003) definition of potential accounting manipulators (nonprofit organizations with standardized prediction errors from a program ratio regression model that are significantly greater than zero at the 10 percent level) (FRQ1). The pseudo R^2 for this model is 14.77 percent. The results indicate that several audit-related factors are associated with financial reporting quality. As predicted, FEES is positively associated with financial reporting quality. The significantly positive coefficient on SOX leads me to reject my null hypothesis, H7, indicating that the effects of SOX did appear to spill over onto nonprofit audits. The coefficients on the NEW and ICFR variables are unexpectedly positive and significant. The positive coefficient on NEW provides support for the concern that longer auditor tenure impairs independence and

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suggests that there could be some merit to mandating audit firm rotation for organizations required to undergo A-133 audits.[49] This is consistent with a recommendation from the Panel on the Nonprofit Sector which was formed in 2004 at the recommendation of the U.S. Senate Finance Committee to improve oversight and governance of the nonprofit sector. Specifically, the Panel recommended that larger nonprofit organizations consider rotation of audit firms on a regular basis (Panel on the Nonprofit Sector 2005). The positive coefficient on ICFR may be the result of increased substantive testing following the identification of weaknesses in internal controls. This increased testing may result in improved financial reporting.[50]

Contrary to results from for-profit studies, I find no evidence that organizations using Big 4 auditors are more likely to be associated with higher financial reporting quality nor do I find evidence that longer audit report lags are associated with higher financial reporting quality. Specifically, the coefficients on AUDSIZE and LAG are both insignificant. Additionally, counter to my expectations, the SPECIAL, LOWRISK, GC, and MNC coefficients are insignificant.

Among the control variables, of those for which directional predictions are made, six are significant in the expected direction (MARGIN, DEPPROG, PROGCHG, AGE, SIZE and STATEGOV) and two are not significant at the $p < 0.10$ level (DEFEXP and DEFREV). Of the three control variables for which I did not make a directional prediction, DONINT is positively

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[49] This result (along with a similar result found in the FRQ3 model) indicates that this study is one of the first to find a possible problem with longer auditor tenure. Of particular note, however, is that the few other studies that do find a similar result, Deis and Giroux (1992) and Deis and Giroux (1996), examine audits in the governmental (public) sector. Thus, although this study's results related to auditor tenure are not consistent with those found in for-profit studies, they are consistent with results found in governmental studies. A possible explanation for the difference in results found in this study and for-profit studies may relate to the overall nature of the client. Specifically, auditors may be less likely to maintain their professional skepticism as the length of the auditor-client relationship increases when auditing organizations attempting to serve the common good versus those that are strictly profit-motivated.

[50] This result (along with a similar result found in the FRQ3 model) differs from the Chan et al. (2008) for-profit study which does not document an association between internal control problems and earnings management at conventional significance levels (the authors conclude they find a positive relationship between internal control problems and earnings management at the 10% significance level using a one-tailed test). Perhaps my finding of a positive association between internal control problems and FRQ indicates auditor effort is greater when there are known deficiencies in internal controls over financial reporting.

significant, GROWTH is negatively significant, and INVMR is insignificant at the $p < 0.10$ level.

7.2.2 FRQ2 - Zero Fundraising Expenses

Column two of Table 8 presents the results for the FRQ measure based on zero fundraising expenses (FRQ2). The pseudo R^2 for this model is 23.79 percent. Again, the results indicate that several audit-related factors are associated with financial reporting quality. The coefficients on FEES, LOWRISK, and GC all have the predicted signs and are statistically significant. Additionally, as with the FRQ1 model, the coefficient on SOX is positive and significant, suggesting a spillover effect.

Again, I find no evidence that organizations using Big 4 auditors are more likely to be associated with higher financial reporting quality nor do I find evidence that longer audit report lags are associated with higher financial reporting quality. The coefficients on AUDSIZE and LAG are both insignificant. Finally, counter to my expectations, I find that the coefficients on SPECIAL, NEW, MNC and ICFR are insignificant.

Among the control variables, of those for which directional predictions are made, three are significant in the expected direction (MARGIN, AGE and STATEGOV), one is significant in the opposite direction (DEFEXP), and four are not significant at the $p < 0.10$ level (DEPPROG, DEFREV, PROGCHG, and SIZE). Of the three control variables for which I did not make a directional prediction, DONINT is positively significant and GROWTH and INVMR are negatively significant.

7.2.3 FRQ3 - Zero Administrative Expenses

Column three of Table 8 presents the results for the FRQ measure based on zero administrative expenses (FRQ3). The pseudo R^2 for this model is 23.24 percent. Using this

measure of financial reporting quality, I also find that several audit-related factors are associated with nonprofit financial reporting quality. The coefficient on GC has the predicted sign and is statistically significant, the SOX coefficient is again found to be positive and significant, and as in the FRQ1 model, the coefficient on NEW is unexpectedly positive and significant. Consistent with the FRQ1 and FRQ2 models, this model reports no evidence of an association between AUDSIZE and financial reporting quality or of an association between LAG and financial reporting quality. Finally, contrary to expectations, the coefficients on SPECIAL, FEES, LOWRISK, MNC, and ICFR are insignificant.

Among the control variables, of those for which directional predictions are made, four are significant in the expected direction (DEPPROG, PROGCHG, AGE, and SIZE) and four are not significant at the $p < 0.10$ level (MARGIN, DEFEXP, DEFREV, and STATEGOV). Of the three variables for which I did not make a directional prediction, DONINT and INVMR are positively significant and GROWTH is negatively significant.

7.2.4 Model Comparisons

Although not all of the above findings are consistent with expectations, the overall results do suggest that several audit-related factors matter with respect to nonprofit financial reporting quality. Comparing the results across the different specifications of FRQ, the SOX variable is positive and significant in all three models, providing strong support for a spillover effect from for-profit audit clients onto nonprofit audit clients in the post-SOX era.[51] The FEES and NEW, variables are positive and significant in two of the three models and the GC variable is negative and significant in two of the three models. These results suggest that (1) nonprofit auditors that work pro-bono or charge lower fees may not expend the amount of effort required to ensure high

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[51] The California Nonprofit Integrity Act of 2004 as well as the nonprofit accountability reports issued by the Panel on the Nonprofit Sector in 2005 and 2006 were instigated as a result of SOX. These trickle-down effects of SOX may have contributed to the higher financial reporting quality found in the post-SOX period.

quality financial reporting, (2) mandatory rotation of nonprofit audit firms should at least be considered and (3) a breakdown in nonprofit management stewardship with respect to the management of resources is linked to the quality of reported expenses. Additionally, the LOWRISK and ICFR variables are each positive and significant in one of the three models. This provides some support for expecting a higher level of financial reporting quality from nonprofits designated as being low-risk and suggests that identified internal control problems over financial reporting may lead to increased substantive testing and ultimately higher quality financial reporting in nonprofit organizations. Finally, the SPECIAL, AUDSIZE, LAG, and MNC variables are insignificant in all three models. The insignificant coefficient on SPECIAL suggests that my specialization measure may not truly be capturing nonprofit auditor specialization.[52] The insignificant coefficient on AUDSIZE suggests that there may not be greater reporting quality benefits associated with hiring a Big 4 auditor as opposed to a non-Big 4 auditor, a finding very different than that found in for-profit audit quality studies.[53] The insignificant coefficient on LAG indicates that a long audit lag does not appear to be associated with more auditor effort, but may just indicate that the auditing firm contracted to perform the NPO audit outside the "busy season" when they audit their SEC clients. Additionally, the insignificant coefficient on MNC suggests that a breakdown in management stewardship with respect to compliance with federal regulations is not linked to the quality of reported expenses.

Although it is not clear why the results differ somewhat across FRQ measures, I conjecture that this may relate to differences in the measures. As noted in Chapter 5, the three

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[52] Given the significant overlap between the specialist measure and Big 4 firms (33.6%), I reestimate the models using the subsample of non-Big 4 firms to determine if my specialization results differ. Consistent with the main results, the coefficients on specialization across all three models are insignificant.

[53] As it is possible that larger nonprofits may have inherently higher financial reporting quality due to more accounting sophistication, nonprofit size rather than auditor size may drive the insignificant auditor size results across the sample. To rule this out, I separate the sample into "large" and "small" nonprofit organizations based on the median value of the NPO's revenues and rerun my three FRQ models. Consistent with my main results, auditor size is insignificant across all large and small subsamples.

measures of FRQ capture potentially different methods by which a nonprofit could manage its program ratio. Specifically, FRQ2 and FRQ3 are focused measures that directly attempt to measure financial reporting quality via specific accounting actions undertaken to manage the program ratio (reporting zero fundraising or zero administrative expenses, respectively). FRQ1, on the other hand, is a broader measure of financial reporting quality that can encompass the underreporting of fundraising and/or administrative expenses as well as strategic decisions to change operations in order to improve the program ratio (real program ratio management).Taken together, however, these results provide some evidence that certain audit-related factors are associated with financial reporting quality in nonprofit organizations, and also confirm that, due to the uniqueness of the nonprofit audit environment, results from for-profit studies cannot necessarily be generalized to the nonprofit sector.

CHAPTER 8

SENSITIVITY ANALYSES

I perform numerous sensitivity analyses to assess the robustness of the main findings in the study. These analyses involve examining: (1) alternative measures of auditor size; (2) alternative measures of auditor specialization; (3) an alternative treatment of the new auditor variable; (4) an alternative measure of audit lag; (5) alternative measures of SOX; (6) alternative measures of the FRQ2 dependent variable; and (7) results across the three primary nonprofit industries. Furthermore, I examine an additional auditor assessment variable that is unique to A-133 audits and additional specifications of FRQ related to the underreporting of fundraising and administrative expenses.

8.1 Additional Auditor Size Analyses

Unlike the for-profit sector in which the majority of audits are performed by one of the Big 4 firms, nonprofit sector organizations use Big 4 auditors less frequently (Keating et al. 2005; Tate 2009). Thus, I extend my definition of auditor size to include the "second tier" audit firms (BIG 10) as well as look at the 25 largest firms in the U.S. (BIG 25). The second tier firms include the six next largest CPA firms based on revenue as reported by the 2007 publication *Inside Public Accounting*. These firms include Grant Thornton, BDO Seidman, RSM McGladrey, CBIZ & Mayer Hoffman McCann, Crowe Group, and BKD. The Big 25 firms include the largest 25 CPA firms based on revenue from the 2007 publication *Inside Public Accounting*. This publication can be found at: www.plattgroupllc.com/top100_2007.pdf.

Table 9 indicates that defining auditor size using the Big 10/non-Big 10 distinction does not alter the main results. The coefficient on auditor size remains insignificant across the three models. However, defining auditor size using the Big 25/non-Big 25 distinction produces positive and significant coefficients on the auditor size variable across all three FRQ models. The other main results remain largely unchanged with the exception that the ICFR coefficients become positive and significant in the FRQ3 models. These results suggest that although there do appear to be quality implications in choosing a very small audit firm instead of one of the largest 25 firms, quality among these largest 25 audit firms does not vary substantially.

8.2 Additional Specialization Analyses

Following Tate (2007), in addition to measuring specialization using the five percent state expertise cut-off level, I also examine a specialist measure that deems an audit firm a specialist if it conducts the greatest number of audits within each state (SPECIAL3). As with all of my specialization measures, I calculate specialization using all available observations in the Federal Audit Clearinghouse Single Audit database, not just those in my dataset. Using this new definition of specialization, the specialist coefficient becomes positive and significant in the FRQ1 model and the coefficient on audit lag becomes positive and marginally significant in the FRQ1 model (see Table 10). Other results remain consistent.

Tate (2007) notes that audit firms may specialize broadly in nonprofit audits or in the specific types of nonprofits they audit. Thus, I also calculate the percentage of audits performed by each audit firm within each industry to determine the A-133 specialists within each industry. Audit firms performing at least five percent of the audits within each industry are considered specialists and all others are considered non-specialists (SPECIAL2). Additionally, I examine a specialist measure that deems an audit firm a specialist if it conducts the greatest number of

audits included in the database within each industry (SPECIAL4). For purposes of determining

industry specialization, I use the twelve major groups established by the National Center for

Charitable Statistics (NCCS), consistent with Tate (2007).[54]

Results for these industry specialist measures are also found in Table 10. Using the

SPECIAL4 definition of specialization, the specialist coefficient becomes positive and

marginally significant in the FRQ2 model. Other results remain consistent except that the NEW

coefficient loses its significance in the FRQ1 model and the ICFR coefficient becomes positive

and marginally significant in the FRQ3 model. The SPECIAL2 variable presents unexpected

specialist results, with a negative and marginally significant coefficient in the FRQ3 model. As

with the results using the SPECIAL4 variable, the coefficient on NEW also loses its significance

in the FRQ1 model. Other results remain consistent.

Finally, consistent with Tate (2007), I perform an untabulated analysis in which I

examine both state and industry specialization using ten percent cut-off levels instead of five

percent cut-off levels. For the state expertise ten percent cut-off measure, I find that the specialist

coefficient is insignificant in the FRQ1 and FRQ2 models, but is positive and significant at the

0.10 level in the FRQ3 model. For the industry expertise ten percent cut-off measure, results

indicate that the specialist coefficient is insignificant in the FRQ1 model, negatively significant

at the 0.10 level in the FRQ2 model, and negatively significant at the 0.05 level in the FRQ3

model.

Overall, there is some evidence that specialization matters with respect to nonprofit

financial reporting quality. However, due to the inconsistency of results across the various

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[54] I use the twelve NCCS groups here, rather than five, to get more specific within industry categories and therefore, provide a better industry classification for determination of auditor industry specialization.

specialist analyses performed, it appears that there is a continued need to further examine the true

nature of the effect of auditor specialization on nonprofit financial reporting quality.

8.3 Additional New Auditor Analysis

The first year reported in the FAC database is 1997 and in the main analysis, the NEW

variable for all organizations in 1997 is coded 0. As a result, if an organization underwent an A-

133 audit for the first time in 1997 or had a different auditor for the 1997 audit than for the 1996

audit, the NEW variable is still coded as 0. To determine if miscoding affects the results, I

eliminate all 1997 data and reestimate the three FRQ models. Results for this reestimation appear

in Table 11. As in the main results, the coefficient on NEW is positive and significant in the

FRQ3 model; however, the marginally significant and positive coefficient found for NEW in the

main FRQ1 model disappears. Other results remain consistent except that the coefficient on LAG

becomes positive and significant in the FRQ1 model.

8.4 Additional Audit Lag Analysis

Single Audit results must be submitted within nine months after the end of the audit

period unless an extension is granted. Thus, an audit lag greater than nine months most likely

indicates that an extension or extensions were granted to the organization. Missing the nine

month deadline and requiring an extension is a possible signal of increased auditor effort.

Therefore, as an alternative to the continuous audit lag measure I use in my main model to

attempt to capture auditor effort, I also measure audit lag using indicator variables. LAG2 is

coded 1 if the number of months between the fiscal year-end and the A-133 audit report date is

greater than nine and 0 otherwise. The results, presented in Table 12, are largely consistent with

those reported in Table 8 using the continuous audit lag measure (LAG). The one exception is

that the ICFR variable becomes positive and significant in the FRQ3 model. The insignificant

coefficient on the audit lag variable confirms that, contrary to results found in the for-profit literature, a long audit lag is not necessarily an indicator of more nonprofit auditor effort.

8.5 Additional SOX Analyses

The Sarbanes-Oxley Act was promulgated in 2002. However, during 2003, the SEC introduced a number of new proposed and final rules that affected manager and auditor reporting. Thus the period 2002-2003 was likely a transition period for auditors and any spillover effect to their nonprofit clients resulting in improved reporting quality may not have manifested until 2003 or 2004. As a result, I define and test the post-SOX period in two additional ways: (1) I exclude the year 2002 from the post-SOX period (SOX2), and (2) I exclude the years 2002 and 2003 from the post-SOX period (SOX3). The results using these alternative definitions of SOX, presented in Table 13, are largely consistent with the main results with the exception that the SOX3 coefficient loses it significance in the FRQ1 model and the SPECIAL coefficient becomes positive and significant in the two FRQ2 models.

8.6 Additional FRQ2 Analyses

In measuring FRQ2, I remove observations that report zero fundraising expense and have less than $10,000 in private donations in an attempt to remove observations that have plausible reasons for reporting zero fundraising expense. It is possible that organizations with less than $10,000 in private donations are able to raise this amount with no fundraising effort. For robustness, I also examine the private donations threshold of $50,000 as suggested by Wing et al. (2006) as well as the private donations thresholds of $1 and $100,000. The results for all three models, presented in Table 14, are consistent with those reported in Table 8.

8.7 Results across the Three Primary Nonprofit Industries

To determine if there is variation in the results across the three primary nonprofit industries (educational, health, and charitable), I partition the full sample into these three groupings and reestimate the models.[55] Similar to the main results, this analysis provides some evidence that the SPECIAL, NEW, FEES, SOX, RISK, GC, and ICFR variables matter to financial reporting quality. However, the results (untabulated) do indicate some variation across industries. Such results are not necessarily surprising though due to the complex interaction of the factors that drive benefits of certain audit factors, such as specialization, in certain industries (Balsam et al. 2003).[56] An important extension of this study then would involve further investigation to tease out and better understand the differences among the three primary nonprofit industry categories that could result in different impacts of audit characteristics.

8.8 Inclusion of ICMP Variable

As noted in Chapters 2 and 4, in addition to providing assessments on material noncompliance with federal regulations, going concern issues, and risk, auditors performing A-133 audits are also required to provide an assessment on the organization's internal controls over major federal programs. As with discoveries of material noncompliance and going concern issues, discoveries of internal control problems over major programs could indicate a breakdown in nonprofit management stewardship and may be linked to lower financial reporting quality. Because information on internal controls over major programs is not available in the electronic Single Audit database until 2001and my sample period begins in 1997, I run, separate from the main models, regression analyses which include this variable. The resulting sample includes only observations from the years 2001-2008. In addition, because my sample period begins in 2001

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[55] Charitable nonprofits include all other types of nonprofits besides educational and health nonprofits.

[56] For example, the complexity of practice in certain nonprofit sectors, such as charity care in hospitals, as well as differential oversight and regulation across the various sectors, may contribute to the variation in results.

and my SOX variable is looking at the difference in financial reporting quality before and after 2002, I remove the SOX variable from this model.[57] The ICMP variable takes a value of 1 if reportable conditions over major federal programs were identified by the auditor and 0 otherwise. The results in Table 15 indicate that the coefficient on ICMP is not significant across any of the three specifications of FRQ and its inclusion does not substantially change the results reported in Table 8. Differences from the main results include the insignificance of the NEW coefficient in the FRQ1 model, the significance of the ICFR coefficient in the FRQ3 model, and the significance of the LAG coefficient in the FRQ1 model.

8.9 Additional Specifications of FRQ Measure: Understated Fundraising and Administrative Expenses

In my main analysis I use dichotomous zero/non-zero fundraising and administrative expense metrics to infer financial reporting quality as the zero reporters have likely underreported these expenses. However, many nonprofits that report positive amounts for fundraising and administrative expense are also likely underreporting these amounts (Yetman and Yetman 2011a; Pollak et al. 2002). Thus I examine two additional measures of financial reporting quality based on whether a nonprofit has likely understated its fundraising expense (FRQ4) or its administrative expense (FRQ5). To construct these two measures I estimate a fundraising (administrative) expense expectations model on the subsample of nonprofits that report some amount of fundraising (administrative) expense. Organizations with standardized prediction errors significantly less than zero at the ten percent level are classified as having low financial reporting quality and the dependent variable is set to zero.[58] All other observations are set to one, indicating that this measure is increasing in financial reporting quality.

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[57] Results are consistent with those described in this section when I leave the SOX variable in the model.
[58] Organizations that have negative residuals are reporting less fundraising (administrative) expense than the model predicts.

The following regression models are adapted from Yetman and Yetman (2011a) and Pollak et al. (2002) and are used to estimate an organization's fundraising and administrative expenses given its source of revenue, size, age, total expenses, charitable objective, and year (the ratio of total assets to total expense is also included for the administrative expenses model):

$$FUNDEXP_{it} = Y_0 + Y_1 DIRECT_{it} + Y_2 INDIRECT_{it} + Y_3 GRANTS_{it} + Y_4 PROGSERV_{it} + Y_5 AGE_{it} + Y_6 TOTEXP_{it} + Y_7 ASSETS_{it} + Y_8 ASSETS^2_{it} + Y_9 TYPE_{it} + Y_{10} YEAR_{it} + \varepsilon_{it} \quad (3)$$

$$ADMINEXP_{it} = \psi_0 + \psi_1 DIRECT_{it} + \psi_2 INDIRECT_{it} + \psi_3 GRANTS_{it} + \psi_4 PROGSERV_{it} + \psi_5 AGE_{it} + \psi_6 TOTEXP_{it} + \psi_7 ASSETS_{it} + \psi_8 ASSETS^2_{it} + \psi_9 AERATIO_{it} + \psi_{10} TYPE_{it} + \psi_{11} YEAR_{it} + \varepsilon_{it} \quad (4)$$

where:

FUNDEXP	=	total fundraising expenses for organization i in year t;
ADMINEXP	=	total administrative expenses for organization i in year t;
DIRECT	=	donations from individuals, corporations, and foundations for organization i in year t;
INDIRECT	=	donations from federated fundraising organizations for organization i in year t;
GRANTS	=	grants from local, state, or federal agencies for organization i in year t;
PROGSERV	=	program service revenue for organization i in year t;
AGE	=	number of years the organization has been tax-exempt (IRS RuleDate);
TOTEXP	=	total expenses for organization i in year t;
ASSETS	=	total assets for organization i in year t;
AERATIO	=	total assets divided by total expenses for organization i in year t;
TYPE	=	four dummy variables which classify observations into the five major subsectors of nonprofits established by the National Center for Charitable Statistics (NCCS); and
YEAR	=	eleven indicator variables which represent the years 1997-2008.

Per Pollak et al. (2002), sources of revenue (direct contributions, indirect contributions, government grants, and program service revenues) are included because organizations that rely on certain revenue sources likely face different pressures for how to allocate their expenses. Age and total expenses are included as Pollak et al. (2002) note that age is commonly cited as a factor in cost allocation decisions and that the raw amount of money spent on administrative and fundraising expenses is partly a function of the organization's total expenditures. Size (assets and

the square of assets), type of nonprofit, and year are included for similar reasons these variables were included in Model 2.[59] The ratio of assets to expenses is included in the administrative expenses model as "increasing organizational assets requires increasing allocations of M&G [management and general expenses] in order to manage and protect them" (Pollak et al. 2002,16).

The results using FRQ4 as the dependent variable, presented in Table 16, indicate that the coefficients on NEW, FEES, and LOWRISK are all positive and significant. No other audit-related variable coefficients are significant. The positive and significant coefficient for NEW is consistent with the main FRQ1 and FRQ3 results, the positive and significant coefficient for FEES is consistent with the main FRQ1 and FRQ2 results, and the positive and significant coefficient for LOWRISK is consistent with the main FRQ2 result. The results using FRQ5 as the dependent variable, also presented in Table 16, indicate that the coefficient on AUDSIZE is positive and significant. This finding is not consistent with those found in the main results using other FRQ measures. No other audit-related coefficients are significant. Although some of the results presented for these two additional specifications of FRQ are unexpected, they should be interpreted with caution as there is very little variation in the dependent variables in these two models and the data may be insufficient for a reasonable analysis.

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[59] Yetman and Yetman (2011a) include the square of assets in addition to total assets in their fundraising and administrative expense models in order to capture potential non-linearities of the size effect.

CHAPTER 9

CONTRIBUTIONS AND LIMITATIONS

9.1 Contributions

Reliable financial reporting in nonprofit organizations matters and audits are an important

tool in monitoring the quality of nonprofit financial reporting. However, despite the importance

of the nonprofit sector to the U.S. economy, the high level of support nonprofit organizations

receive from U.S. citizens and businesses, the increasing demand for nonprofit accountability,

and the extensive academic research on audit quality in the for-profit sector, there is currently

little nonprofit audit research. This study adds to the small but growing body of empirical

research related to U.S. nonprofit audits through an early attempt to examine the effects of

various audit-related factors on nonprofit financial reporting quality. Although a prior study

examines the effects of various governance mechanisms on nonprofit financial reporting quality,

this study is the first to provide an in-depth analysis of the monitoring effects specifically of

external auditors on reporting quality in nonprofit organizations.

The findings of the study not only help improve our understanding of factors that

influence NPO reporting quality, but also contribute to the generalizability of results concerning

the relations between various audit variables and financial reporting quality across sectors.

Consistent with arguments used in prior literature for conducting similar audit research in

different countries (Francis et al. 2005), audit research on nonprofit organizations is called for

despite the plethora of compelling audit evidence found in for-profit studies as the nonprofit

audit environment is qualitatively different than the for-profit audit environment and there are

important institutional differences between the two sectors. The results of this study confirm the validity of these arguments as they demonstrate that (1) not all audit-related factors found to matter with respect to for-profit financial reporting quality, matter with respect to nonprofit financial reporting quality and (2) some matter in unexpected ways in the nonprofit sector. Thus, these findings may have important implications for nonprofit researchers relying on for-profit audit research to predict nonprofit behavior.

Recent scandals in the nonprofit sector have led to increased public scrutiny of nonprofit financial information and a call for increased accountability. By improving our understanding of factors that influence nonprofit financial reporting quality, this study's findings may be of interest to various NPO stakeholders, such as NPO boards of directors, governmental regulators, charity watchdog agencies, policymakers, and academic researchers, that seek to improve the quality of NPO financial reports and restore confidence in the integrity of nonprofit organizations.

9.2 Limitations

While this study provides important initial insights into audit-related factors that influence nonprofit financial reporting quality, it is important to note that because it examines only nonprofits that expend at least $500,000 in federal funds, its results cannot be generalized to all nonprofits. It is likely that nonprofit organizations that receive federal funding are "fundamentally different from nonprofits that do not receive federal funding" (Tate 2007, 68). Additionally, the sample is restricted to those organizations that appear in the SOI database which is biased toward larger organizations.

Since financial reporting quality is not observable, I place reliance on proxy measures that, although used in prior literature, are not without criticism. For example, although I attempt

to rule out organizations with plausible reasons for reporting zero fundraising or administrative expenses, I cannot determine if all firms in the sample that reported zero fundraising or zero administrative expenses did so with the intent to manage the program ratio. It is possible that some of these firms actually did incur zero fundraising or administrative expenses. Also, I recognize that there may be measurement error in some of the other variables in my model, such as audit fees, new auditor, and auditor specialization.

In addition, I only examine organizations that appear to either manage the program ratio by any means (general program ratio management) or by specifically reporting zero fundraising or zero administrative expenses. I do not examine organizations that manage the program ratio using other specific methods, such as via joint cost allocations or telemarketing expenses. It is possible that the auditors may be more or less effective at uncovering these specific forms of program ratio management.

Along this same line, prior research suggests that nonprofit managers sometimes use both accounting and "real" methods to improve their reported program ratios (Tinkelman 2009; Parsons et al. 2011). Whereas my FRQ2 and FRQ3 models (which investigate zero versus non-zero fundraising and administrative expense organizations), relate to accounting methods of managing the program ratio, the FRQ1 model (which attempts to identify potential manipulators based on expected program ratios) can encompass both types of program ratio management; i.e. companies reporting unusually high program ratios may have achieved these results using either or both types of ratio management. Because real program ratio management techniques are outside the purview of GAAP, they are unlikely to draw auditor scrutiny. Thus, to the extent that the identified potential accounting manipulators in the FRQ1 model used real techniques instead

of or in combination with accounting techniques, it biases me against finding that audit-related factors matter.

Finally, although this study provides several different measures of auditor specialization, both by industry and by state, the results are not consistent and thus difficult to interpret. Due to the inconsistency across the various audit specialist analyses performed, it appears that there is a continued need to further examine the true nature of the effect of auditor specialization on nonprofit financial reporting quality.

CHAPTER 10

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

10.1 Summary

This study examines whether and how audit-related factors are associated with financial reporting quality in nonprofit organizations. Due to important audit environment and institutional differences between the nonprofit and for-profit sectors, results on audit-related factors in for-profit organizations may not necessarily hold for nonprofit organizations. Thus, the nonprofit sector provides a useful setting to test the generalizability of the effect of audit-related factors on financial reporting quality in for-profit organizations.

Using logistic regression analyses, my main results suggest that audit fees, new auditors, and the Sarbanes-Oxley Act may have some effect on financial reporting quality in nonprofit organizations. In addition, A-133 auditor assessments related to auditee risk, going-concern issues, and reportable conditions over financial reporting also may be factors in nonprofit financial reporting quality. However, contrary to results found in for-profit studies, new auditors and reportable conditions over financial reporting appear to be associated with *higher* nonprofit financial reporting quality, and auditor size using the traditional Big 4/non-Big 4 designation, as well as audit lag, do not appear to be significant factors in determining nonprofit financial reporting quality. Furthermore, I find no evidence that auditor specialization is associated with financial reporting quality and material non-compliance with federal regulations does not appear to be an important factor.

Results from performing numerous sensitivity analyses are largely consistent with these main results with two notable exceptions: (1) I find mixed results using various alternative auditor specialization measures and (2) I find positive and significant auditor size results when defining auditor size as Big 25 or non-Big 25 auditing firm. The first exception suggests a need for future studies to revisit measures of auditor specialization for nonprofit organizations and the second exception suggests that auditor size may have very different quality implications for nonprofit organizations compared to for-profit organizations. Overall, my study provides some evidence that certain audit-related factors are associated with financial reporting quality in nonprofit organizations, and also confirms that, due to the uniqueness of the nonprofit audit environment, results from for-profit studies cannot necessarily be generalized to the nonprofit sector. The next section presents potential avenues of research related to nonprofit audits and program ratio management, including suggestions for addressing measures of auditor specialization.

10.2 Suggestions for Future Research

Currently, we know very little about auditors' attitudes toward nonprofit audits in general or toward program ratio management in particular. Future research could employ a survey methodology with nonprofit auditors similar to that used by Parsons et al. (2011) with nonprofit managers to determine nonprofit auditors' beliefs and behaviors regarding these two topics. The survey could approach such questions as, is program ratio management even on auditors' radars? Do auditors receive training in nonprofit risk areas? Do they feel they are given adequate time and resources to effectively conduct nonprofit audits or are they encouraged to speed through these types of audits in order to have more time available to spend on their for-profit clients? What percentage of their firm's revenue comes from nonprofit audit clients? How much time is

spent on an average nonprofit audit? How do auditors determine whether or not shared cost allocations are reasonable? How thoroughly do auditors review joint cost activity details? The answers to these and other questions would provide us with additional and much needed insight into the quality of nonprofit audits.

Since this study only examines nonprofits that expend at least $500,000 in federal funding, an important extension of this study would involve examining the effects of audit-related factors on other nonprofit organizations, such as those that do not receive significant federal funding yet voluntarily undergo audit procedures. Another extension would be to compare audit sector quality within audit firms; i.e., does KPMG provide the same level of audit quality for its public company clients and its nonprofit clients? Also, this study finds that nonprofits that are audited by one of the largest 25 accounting firms display higher levels of financial reporting quality than those audited by non-Big 25 firms. The 25 largest firms all have multiple practice offices of varying sizes. It would be interesting to determine if the high level of audit quality found in these firms is uniform across both small and large individual firm practice offices.

Chi et al. (2011) find that for-profit organizations resort to real earnings management activities when high quality auditors constrain their ability to manage earnings via accounting methods. This finding suggests that hiring high quality auditors may result in the unintended consequence of potentially costly real earnings management. This line of research could be extended to include nonprofit organizations by developing a measure of nonprofit real program ratio management. Just as for-profit executives admitted to reducing discretionary expenditures to manage earnings in the seminal Graham et al. (2005) survey, nonprofit managers admitted to reducing various discretionary expenses (such as training and travel) in order to manage the

program ratio in the Parsons et al. (2011) survey. Thus, I propose that the reduced discretionary expenditures model developed by Roychowdhury (2006) for the purpose of identifying potential real earnings management organizations could possibly be adapted to the nonprofit setting to identify potential real program ratio management organizations. As the results from this study identified the largest 25 accounting firms as high quality auditors, further investigation can determine if nonprofit organizations using one of these firms exhibit higher levels of real program ratio management.

Once a measure of real program ratio management activity is developed, many other avenues for future research will open. For example, we can investigate: (1) organizational factors that influence real program ratio management behavior, (2) the potential economic consequences of engaging in such behavior, (3) the effects of board and audit committee characteristics as well as other governance mechanisms on real program ratio management, and (4) if organizations habitually engage in real program ratio management from year to year. It would also be interesting to investigate how nonprofit managers choose between the two forms of program ratio management as well as how nonprofit managers time the real activities management.

As reported in Kitching (2009, 523), "because the Big 4 firms have implemented new client acceptance and risk management policies" in the aftermath of SOX, many nonprofits that previously used Big 4 firms in the pre-SOX era switched to medium and small firms post-SOX. As a result of this post-SOX shift away from Big 4 auditors, I would like to reexamine the findings of Keating et al. (2005) using post-SOX data. Using A-133 Single Audit data and relying predominantly on univariate statistical analysis, Keating et al. (2005) investigate NPOs' audit firm selection and the frequency of various audit findings (e.g. going concern language, unqualified opinions, low risk, etc.) as well as the effect of audit firm type and organizational

characteristics on the frequency of various audit findings during the period 1997-1999. Due to the change in nonprofit auditor market concentration after SOX, potential SOX spillover effects, and the notable increase in the number of nonprofit organizations included in the A-133 database each year since the time period of the Keating et al. (2005) study, I expect that post-SOX results may differ from the pre-SOX results found in their study.

Most studies examining program ratio management (Trussel 2003; Krishnan et al. 2006; Keating et al. 2008; Tinkelman 2009; Yetman and Yetman 2011a) focus on managing the program ratio upward. However, as Jones and Roberts (2006) point out, nonprofits may, under certain conditions, wish to manage the program ratio downward. These conditions include: (1) if they fear they may not be able to sustain the current program ratio percentage in future years and will have to explain the subsequent decrease or decreases to their board of directors and/or donors, or (2) if they fear that regulators will become suspicious if the current program ratio percentage has risen dramatically from previous years. Due to a lack of studies investigating this phenomenon, downward program ratio management may lead to several potentially fruitful avenues for future research, such as examining the effects of audit-related factors on this practice.

This study's results indicate that nonprofit financial report quality improved post-SOX, suggesting a spillover effect onto nonprofit organizations. It would be interesting to pursue this line of research by surveying firms that audit both public and nonprofit clients to learn (1) whether and how their procedures, attitudes, and training on nonprofit audits changed as a result of SOX, (2) whether and how their nonprofit audit clients' procedures and attitudes changed as a result of SOX, and (3) their opinions on proposed SOX-like regulation for nonprofits.

As noted above, the inconsistent results found in this study for the auditor specialization measures suggest the need for improved measures of nonprofit specialization. Thus, future research could investigate alternative ways to measure nonprofit auditor specialization, such as using the percentage of audit firm clientele that are nonprofit organizations or the percentage of total firm revenue from nonprofit clients. As noted by Balsam et al. (2003), firms may accrue expertise from auditing a large number of clients or a small number of large clients. Unlike the measures used in this study, which attempted to capture expertise based on the total number of nonprofit clients audited, these additional measures would capture expertise for the firms that audit a small number of large clients. As a result, firms not previously identified as specialists may receive that designation under the new methods. For example, this study's specialist definitions may not have deemed an audit firm a specialist if it only had a few nonprofit audit clients, but if these few clients represented a large percentage of the firm's client base and/or revenues, under the new specialist definitions, that firm would be deemed a specialist. Additionally, rather than measuring specialization on the state level as suggested by Tate (2007), perhaps future studies should measure specialization on the regional or city level.

Further research can investigate whether and how program ratio management influences various aspects of an organization's operations, including the decision to change auditors and which auditor is selected and whether or not the organization receives a qualified financial statement opinion from its auditors. Additionally, a future study could examine the likelihood of program ratio management (upward or downward) following nonprofit financial executive changes as well as the relationship between program ratio management and the position of the top financial person in the organization (CFO, Executive Director, Controller, Financial Analyst, Treasurer, Deputy Administrator, etc).

Finally, Wing et al. (2006) note that due to the widespread underreporting of fundraising and administrative expenses in the nonprofit sector, functional expense reporting is likely to be the accounting profession's next big scandal. Similar to for-profit organizations, financial irregularities of any type can leave a nonprofit organization open to scandal and adverse publicity, as witnessed by the wave of nonprofit scandals in recent years fueled by exorbitant executive spending, embezzlement of funds, pyramid schemes, and other fraudulent activities. As nonprofits depend on their good reputations to raise funds and maintain operations, when these reputations are marred by scandal, they may find themselves struggling to survive (Gilkeson 2007). For example, after the CEO of the United Way of the National Capital Area was convicted of fraud in 2001, the organization's private donations decreased by more than thirty million dollars, representing a thirty percent decline in revenues from the prior year (Gilkeson 2007). A possible avenue for future research would involve examining, in periods during and after uncovered nonprofit financial scandals, if other nonprofit organizations with charitable objectives similar to the scandal organizations experienced donation decline contagion effects. If this contagion effect exists, it would serve to highlight the warning heeded by Hager (2003a, 51) that when nonprofits engage in questionable reporting (such as questionable expense reporting) they may "win in the short run, [but] the bigger picture points to a variety of losers."

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Table 1
Definitions of Variables

Panel A – Main Results

Variable Name	Description

FINANCIAL REPORTING QUALITY MEASURES

FRQ1	Indicator variable with a value of 0 if the NPO is identified as having an abnormally high program ratio as estimated from a regression specification (i.e. standardized residuals greater than zero at the ten percent level) and 1 otherwise.
FRQ2	Indicator variable with a value of 0 if the NPO reports zero fundraising expenses when in fact it should plausibly have reported non-zero amounts and 1 otherwise.
FRQ3	Indicator variable with a value of 0 if the NPO reports zero administrative expenses when in fact it should plausibly have reported non-zero amounts and 1 otherwise.

AUDIT-RELATED FACTORS

AUDSIZE	Indicator variable with a value of 1 if the audit was performed by a Big 4 auditor and 0 otherwise.
SPECIAL	Indicator variable with a value of 1 if the audit firm performed at least five percent of the audits within a state and 0 otherwise.
NEW	Indicator variable with a value of 1 if a different auditor performed the previous year's audit or if this is the first year that the NPO is included in the database after 1997 and 0 otherwise.
FEES	Accounting expenses as reported on Form 990.
LAG	The number of days between the fiscal year-end and the A-133 audit report date.
SOX	Indicator variable with a value of 1 if the audit year is 2002 or later and 0 otherwise.
LOWRISK	Indicator variable with a value of 1 if the auditor deems the organization to be a low-risk auditee and 0 otherwise.
GC	Indicator variable with a value of 1 if a going-concern explanatory paragraph is included in the financial statement opinion and 0 otherwise.
ICFR	Indicator variable with a value of 1 if reportable conditions over financial reporting were identified by the auditor and 0 otherwise.
MNC	Indicator variable with a value of 1 if the auditor discovered instances of material noncompliance with federal programs and 0 otherwise.

CONTROL VARIABLES

MARGIN	The excess of revenues over expenses (i.e., surplus) divided by revenues.
DEFEXP	Prepaid and deferred charges plus other assets divided by total assets.
GROWTH	Annual growth in NPO's revenues (change in revenue divided by revenue at beginning of year).
DEPPROG	Depreciation allocated to programs divided by total depreciation plus net fixed assets.
DEFREV	Deferred revenues divided by total assets.
PROGCHG	Annual growth in NPO's program ratio (change in program ratio divided by program ratio at beginning of year).
AGE	Number of years the NPO has been tax-exempt (IRS RuleDate).
DONINT	Total donations divided by total revenues.
SIZE	Natural log of total revenues.
STATEGOV	An index of seventeen possible reporting requirements and laws imposed by a state on its NPOs (taken from Desai and Yetman 2006).
INVMR	Inverse Mills ratio for endogenous auditor choice.
INDUSTRY	Four indicator variables representing the five major nonprofit subsectors as classified by the NCCS: arts, education, health, human services, and "other."

Panel B – Additional Analyses

Variable Name	Description
AUDIT-RELATED FACTORS	
ICMP	Indicator variable with a value of 1 if reportable conditions over major federal programs were identified by the auditor and 0 otherwise.
BIG10	Indicator variable with a value of 1 if the audit was performed by one of the ten largest CPA firms (based on revenue) and 0 otherwise. These firms include the Big 4 plus Grant Thornton, BDO Seidman, RSM McGladrey, CBIZ & Mayer Hoffman McCann, Crowe Group, and BKD.
BIG25	Indicator variable with a value of 1 if the audit was performed by one of the twenty-five largest CPA firms (based on revenue) and 0 otherwise.
SPECIAL2	Indicator variable with a value of 1 if the audit firm performed at least five percent of the audits within an industry and 0 otherwise.
SPECIAL3	Indicator variable with a value of 1 if the audit firm performed the most audits within a state and 0 otherwise.
SPECIAL4	Indicator variable with a value of 1 if the audit firm performed the most audits within an industry and 0 otherwise.
LAG2	Indicator variable with a value of 1 if the number of months between the fiscal year-end and that A-133 audit report date is greater than nine and 0 otherwise
SOX2	Indicator variable with a value of 1 if the audit year is 2003 or later and 0 otherwise.
SOX3	Indicator variable with a value of 1 if the audit year is 2004 or later and 0 otherwise.

Table 2
Sample Selection

	Full Dataset	**FRQ1**	**FRQ2**	**FRQ3**
Merge of SOI and FAC databases	33,127	33,127	33,127	33,127
Less: data screens or requirements	--------	(2,758)	(7,529)	(53)
Less: missing control variables	(3,306)	(2,875)	(2,168)	(3,294)
Final sample	29,821	27,494	23,430	29,780

Note: Not all of the merged observations are used in each empirical model because of differing data screens and requirements as discussed in Chapter 5.

Table 3
Descriptive Statistics

Variable	Mean	St. Dev.	25th Percentile	Median	75th Percentile
FRQ1	0.956	0.204	1.000	1.000	1.000
FRQ2	0.773	0.419	1.000	1.000	1.000
FRQ3	0.965	0.185	1.000	1.000	1.000
AUDSIZE	0.352	0.478	0.000	0.000	1.000
SPECIAL	0.195	0.396	0.000	0.000	0.000
NEW	0.137	0.344	0.000	0.000	0.000
FEES	83.732	150.667	0.000	35.570	90.080
LAG	227.021	150.943	134.000	205.000	270.000
SOX	0.629	0.483	0.000	1.000	1.000
LOWRISK	0.711	0.453	0.000	1.000	1.000
GC	0.007	0.086	0.000	0.000	0.000
ICFR	0.139	0.346	0.000	0.000	0.000
MNC	0.017	0.128	0.000	0.000	0.000
MARGIN	0.049	0.170	-0.008	0.037	0.112
DEFEXP	0.057	0.098	0.007	0.019	0.061
GROWTH	0.083	0.233	-0.009	0.059	0.140
DEPPROG	0.084	0.153	0.029	0.048	0.078
DEFREV	0.025	0.064	0.000	0.002	0.018
PROGCHG	0.002	0.055	-0.012	0.000	0.012
AGE	38.295	20.419	21.000	37.000	57.000
DONINT	0.139	0.194	0.006	0.066	0.183
SIZE	16.944	1.888	15.881	17.060	18.145
STATEGOV	11.524	2.957	10.000	13.000	13.000
INVMR	0.887	0.454	0.540	0.809	1.221

The variable and sample definitions are presented in Tables 1 and 2, respectively. All statistics reported are based on the full dataset (n=29,821) except those for FRQ1 (n=27,494), FRQ2 (n=23,430), and FRQ3 (n=29,780).

Table 4
Sample Frequencies

Panel A – Number of observations by major nonprofit sub-sector.

Sub-sector	Frequency	Percent
Arts, culture, and humanities	837	2.8
Education	10,700	35.9
Health	7,073	23.7
Human services	8,484	28.4
Other	2,727	9.1
Total	29,821	100.0

All statistics reported are based on the full dataset (n=29,821).

Panel B – Number of observations by year.

Sub-sector	Frequency	Percent
1997	1,681	5.6
1998	1,934	6.5
1999	2,293	7.7
2000	2,437	8.2
2001	2,726	9.1
2002	3,037	10.2
2003	3,088	10.4
2004	2,531	8.5
2005	2,617	8.8
2006	2,720	9.1
2007	2,713	9.1
2008	2,044	6.9
Total	29,821	100.0

All statistics reported are based on the full dataset (n=29,821).

Table 5
Two-Way Tabulations of FRQ Variables

KEY
FREQUENCY
CELL PERCENTAGE

FRQ1 x FRQ2

	FRQ2=0	FRQ2=1	TOTAL
FRQ1=0	**351**	310	661
	1.50	1.33	2.83
FRQ1=1	4,962	17,736	22,698
	21.24	75.93	97.17
TOTAL	5,313	18,046	23,359
	22.74	77.26	100.00

FRQ1 x FRQ3

	FRQ3=0	FRQ3=1	TOTAL
FRQ1=0	**469**	707	1,176
	1.71	2.57	4.28
FRQ1=1	86	26,207	26,293
	0.31	95.41	95.72
TOTAL	555	26,914	27,469
	2.02	97.98	100.00

FRQ2 x FRQ3

	FRQ3=0	FRQ3=1	TOTAL
FRQ2=0	**172**	5,142	5,314
	0.73	21.95	22.68
FRQ2=1	73	18,041	18,114
	0.31	77.01	77.32
TOTAL	245	23,183	23,428
	1.05	98.95	100.00

Table 6
Significance Tests for Differences in Means

Variable	FRQ1		FRQ2		FRQ3	
	=1	=0	=1	=0	=1	=0
AUDSIZE	0.372	0.217***	0.402	0.312***	0.361	0.143***
SPECIAL	0.200	0.162***	0.209	0.179***	0.196	0.160***
NEW	0.134	0.148	0.124	0.152***	0.137	0.148
FEES	89.044	35.206***	93.760	76.351***	85.781	30.412***
LAG	231.200	207.800***	229.600	232.700	228.600	185.400***
SOX	0.631	0.580***	0.642	0.590***	0.631	0.582***
LOWRISK	0.717	0.655***	0.742	0.670***	0.713	0.658***
GC	0.007	0.005	0.003	0.016***	0.007	0.017**
ICFR	0.144	0.108***	0.141	0.151*	0.141	0.095***
MNC	0.016	0.016	0.014	0.020***	0.016	0.027**
MARGIN	0.062	0.005***	0.078	0.038***	0.053	-0.050***
DEFEXP	0.055	0.053	0.048	0.070***	0.057	0.065**
GROWTH	0.085	-0.105**	0.086	0.089	0.083	0.082
DEPPROG	0.080	0.113***	0.073	0.094***	0.082	0.140***
DEFREV	0.025	0.034***	0.024	0.030***	0.025	0.017***
PROGCHG	0.002	0.012***	0.003	0.002	0.002	0.005***
AGE	40.306	26.486***	44.813	32.332***	38.908	21.271***
DONINT	0.153	0.109***	0.196	0.086***	0.143	0.036***
SIZE	17.190	15.855***	17.375	16.987***	17.033	14.626***
STATEGOV	11.521	11.051***	11.626	11.245***	11.530	11.378
INVMR	0.849	1.152***	0.776	0.979***	0.873	1.270***
N	26,297	1,197	18,116	5,314	28,723	1,057

*, **, and *** represent significant differences at the .10, .05, and .01 levels, respectively. Significance tests are two-tailed. The variable and sample definitions are presented in Tables 1 and 2, respectively.

Table 7
Correlations among Independent Variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(1) AUDSIZE	1.000																				
(2) SPECIAL	-0.017*	1.000																			
(3) NEW	-0.084*	-0.032*	1.000																		
(4) FEES	0.380*	0.000	-0.028*	1.000																	
(5) LAG	0.174*	-0.015*	0.070*	0.143*	1.000																
(6) SOX	-0.131*	0.037*	-0.025*	0.065*	-0.047*	1.000															
(7) LOWRISK	0.041*	0.041*	-0.156*	-0.025*	-0.085*	0.047*	1.000														
(8) GC	0.033*	0.012*	0.013*	0.061*	0.051*	0.005	-0.046*	1.000													
(9) ICFR	-0.133*	0.051*	0.066*	0.017*	0.078*	0.057*	-0.194*	0.059*	1.000												
(10) MNC	-0.053*	-0.015*	0.034*	-0.010	0.066*	-0.012*	-0.133*	0.055*	0.212*	1.000											
(11) MARGIN	0.098*	0.001	-0.013*	0.053*	0.014*	-0.115*	0.038*	-0.057*	-0.017*	-0.044*	1.000										
(12) DEFEXP	0.063*	0.004	0.025*	0.090*	0.047*	0.030*	-0.049*	0.052*	0.007	0.006	-0.039*	1.000									
(13) GROWTH	0.008	-0.012*	0.042*	0.005	0.013*	0.004	-0.025*	-0.014*	-0.003	-0.003	0.354*	-0.005	1.000								
(14) DEPPROG	-0.031*	-0.012*	-0.012*	0.000	0.002	0.014*	-0.017*	0.022*	0.001	0.009	-0.023*	0.046*	0.003	1.000							
(15) DEFREV	-0.010	-0.011*	-0.001	-0.015*	0.020*	0.003	-0.016*	-0.008	0.014*	0.016*	-0.027*	-0.032*	0.008	-0.008	1.000						
(16) PROGCHG	0.005	0.000	0.004	-0.002	-0.004	-0.002	-0.012*	-0.009	-0.006	-0.002	-0.005	-0.003	0.072*	0.015*	-0.005	1.000					
(17) AGE	0.218*	0.047*	-0.069*	0.149*	0.053*	0.050*	0.085*	-0.015*	0.013*	-0.040*	0.167*	-0.046*	-0.036*	-0.093*	-0.063*	-0.002	1.000				
(18) DONINT	0.003	-0.009	0.026*	-0.050*	-0.015*	-0.013*	0.003	-0.042*	0.001	-0.020*	0.185*	-0.039*	0.098*	-0.021*	-0.043*	0.013*	0.066*	1.000			
(19) SIZE	0.549*	0.041*	-0.068*	0.501*	0.189*	0.042*	0.053*	0.021*	-0.007	-0.055*	0.289*	0.061*	0.068*	-0.038*	0.015*	-0.003	0.427*	0.002	1.000		
(20) STATEGOV	0.057*	-0.082*	-0.012*	0.043*	0.062*	-0.010	0.001	0.007	-0.007	0.003	-0.031*	0.020*	0.002	-0.023*	0.001	-0.007	0.040*	0.015*	0.041*	1.000	
(21) INVMR	-0.564*	-0.056*	0.058*	-0.456*	-0.149*	-0.042*	-0.060*	-0.014*	0.030*	0.057*	-0.235*	-0.078*	-0.029*	0.077*	0.070*	-0.004	-0.453*	-0.024*	-0.874*	-0.069*	1.000

*represents two-tailed significance at the p-value < .05 level. All variables are defined in Table 1. All correlations reported are based on the full dataset (n=29,821).

Table 8
Logistic Regression Model Estimates

$$FRQ_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} +$$
$$\beta_9 ICFR_{it} + \beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} +$$
$$\beta_{16} PROGCHG_{it} + \beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$$

Variable	Pred. Sign	FRQ1	FRQ2	FRQ3
Constant		-6.201***	1.084	-10.068***
		(-3.34)	(0.90)	(-6.82)
AUDSIZE (H5)	?	-0.022	-0.028	-0.040
		(-0.12)	(-0.26)	(-0.16)
SPECIAL (H1)	+	0.205	0.164	0.202
		(1.24)	(1.63)	(0.96)
NEW (H2)	-	0.162*	-0.022	0.231**
		(1.69)	(-0.40)	(2.22)
FEES (H3)	+	0.000**	0.000***	0.000
		(1.94)	(2.52)	(0.16)
LAG (H6)	?	0.000	0.000	0.000
		(1.56)	(0.40)	(1.05)
SOX (H7)	?	0.189**	0.366***	0.211**
		(2.28)	(7.08)	(2.26)
LOWRISK (H9)	+	0.131	0.168***	0.118
		(1.17)	(2.51)	(0.91)
GC (H10)	-	0.403	-0.962***	-0.838**
		(0.80)	(-2.93)	(-2.35)
ICFR (H4)	-	0.341***	-0.033	0.255
		(2.57)	(-0.40)	(1.63)
MNC (H8)	-	0.174	0.017	-0.006
		(0.61)	(0.09)	(-0.02)
MARGIN	+	1.266***	0.461*	-0.380
		(3.81)	(1.89)	(-1.24)
DEFEXP	+	-0.524	-1.442***	-0.648
		(-0.83)	(-3.69)	(-0.98)
GROWTH	?	-0.658***	-0.188*	-0.293**
		(-5.36)	(-1.84)	(-2.09)
DEPPROG	-	-0.844***	-0.102	-1.263***
		(-3.40)	(-0.48)	(-5.68)
DEFREV	+	-0.782	-0.002	0.078
		(-0.82)	(-0.00)	(0.05)
PROGCHG	-	-1.801***	0.097	-0.833**
		(-5.13)	(0.30)	(-2.03)
AGE	+	0.024***	0.021***	0.017***
		(5.32)	(8.88)	(2.93)
DONINT	?	1.875***	4.003***	4.165***
		(3.84)	(10.66)	(4.30)
SIZE	+	0.424***	-0.080	0.679***
		(4.26)	(-1.33)	(8.33)
STATEGOV	+	0.041**	0.031**	0.027
		(1.94)	(2.16)	(1.02)
INVMR	?	0.169	-0.895***	1.230***
		(0.52)	(-4.14)	(3.90)
Observations		27,494	23,430	29,780
Pseudo R^2		14.77	23.79	23.24

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively.

Table 9
Logistic Regression Model Estimates with Alternative Definitions of Auditor Size

$$FRQ1_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} + \beta_9 ICFR_{it} +$$
$$\beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} + \beta_{16} PROGCHG_{it} +$$
$$\beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$$

Variable	Pred. Sign	FRQ1		FRQ2		FRQ3	
Constant		-5.833***	-5.754***	1.616	1.482	-9.667***	-9.649***
		(-3.22)	(-3.19)	(1.40)	(1.29)	(-6.67)	(-6.70)
BIG10 (H5)	?	0.096		0.095		0.259	
		(0.57)		(0.96)		(1.22)	
BIG25 (H5)	?		0.278*		0.195**		0.497**
			(1.69)		(2.05)		(2.47)
SPECIAL (H1)	+	0.200	0.153	0.164	0.142	0.186	0.110
		(1.21)	(0.91)	(1.63)	(1.41)	(0.88)	(0.51)
NEW (H2)	-	0.164*	0.162*	-0.023	-0.027	0.231**	0.216**
		(1.71)	(1.70)	(-0.42)	(-0.49)	(2.23)	(2.10)
FEES (H3)	+	0.000*	0.000*	0.000**	0.000**	0.000	0.000
		(1.85)	(1.75)	(2.48)	(2.42)	(0.15)	(0.34)
LAG (H6)	?	0.000	0.000	0.000	0.000	0.000	0.000
		(1.57)	(1.60)	(0.38)	(0.41)	(1.02)	(1.09)
SOX (H7)	?	0.202***	0.218***	0.385***	0.392***	0.231***	0.231***
		(2.53)	(2.74)	(7.65)	(7.87)	(2.53)	(2.55)
LOWRISK (H9)	+	0.130	0.124	0.166**	0.163**	0.128	0.131
		(1.16)	(1.12)	(2.47)	(2.43)	(0.99)	(1.02)
GC (H10)	-	0.399	0.406	-0.971***	-0.971***	-0.841**	-0.850**
		(0.80)	(0.81)	(-2.96)	(-2.94)	(-2.34)	(-2.37)
ICFR (H4)	-	0.354***	0.361***	-0.020	-0.015	0.285*	0.289*
		(2.70)	(2.77)	(-0.25)	(-0.19)	(1.85)	(1.88)
MNC (H8)	-	0.181	0.193	0.026	0.031	0.012	0.006
		(0.63)	(0.67)	(0.14)	(0.16)	(0.04)	(0.02)
MARGIN	+	1.311***	1.354***	0.460*	0.480**	-0.306	-0.275
		(3.95)	(4.06)	(1.87)	(1.95)	(-0.99)	(-0.89)
DEFEXP	+	-0.539	-0.551	-1.480***	-1.479***	-0.713	-0.775
		(-0.85)	(-0.87)	(-3.80)	(-3.80)	(-1.08)	(-1.18)
GROWTH	?	-0.662***	-0.667***	-0.177*	-0.179*	-0.298**	-0.302**
		(-5.36)	(-5.39)	(-1.72)	(-1.74)	(-2.12)	(-2.16)
DEPPROG	-	-0.827***	-0.825***	-0.081	-0.092	-1.250***	-1.249***
		(-3.34)	(-3.35)	(-0.38)	(-0.43)	(-5.65)	(-5.66)
DEFREV	+	-0.742	-0.761	0.032	-0.004	0.184	0.147
		(-0.78)	(-0.80)	(0.05)	(-0.01)	(0.12)	(0.10)
PROGCHG	-	-1.823***	-1.826***	0.080	0.089	-0.823**	-0.788*
		(-5.19)	(-5.19)	(0.24)	(0.27)	(-2.00)	(-1.91)
AGE	+	0.024***	0.024***	0.021***	0.021***	0.017***	0.016***
		(5.27)	(5.28)	(8.72)	(8.74)	(2.86)	(2.82)
DONINT	?	1.864***	1.844***	3.938***	3.926***	4.259***	4.243***
		(3.82)	(3.79)	(10.54)	(10.51)	(4.32)	(4.30)
SIZE	+	0.402***	0.393***	-0.115**	-0.114**	0.658***	0.655***
		(4.08)	(3.98)	(-1.95)	(-1.94)	(8.03)	(7.93)
STATEGOV	+	0.040*	0.039*	0.031**	0.030**	0.027	0.023
		(1.93)	(1.84)	(2.16)	(2.10)	(0.99)	(0.86)
INVMR	?	0.127	0.173	-1.011***	-0.963***	1.213***	1.288***
		(0.39)	(0.53)	(-4.67)	(-4.40)	(3.94)	(4.14)
Observations		27,494	27,494	23,430	23,430	29,780	29,780
Pseudo R^2		14.78	14.89	23.94	23.97	23.19	23.42

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively.

Table 10
Logistic Regression Model Estimates with Alternative Definitions of Specialization

$FRQ_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} + \beta_9 ICFR_{it} + \beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} + \beta_{16} PROGCHG_{it} + \beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$

Variable	Pred. Sign	FRQ1			FRQ2			FRQ3		
Constant		-6.024***	-6.481***	-6.063***	0.823	1.267	1.013	-9.830***	-9.981***	-9.738***
		(-3.34)	(-3.49)	(-3.34)	(0.70)	(1.07)	(0.86)	(-6.77)	(-6.85)	(-6.73)
AUDSIZE (H5)	?	-0.068	0.021	0.040	-0.061	-0.046	-0.091	0.307	0.005	-0.080
		(-0.30)	(0.11)	(0.21)	(-0.45)	(0.42)	(-0.82)	(1.01)	(0.02)	(-0.33)
SPECIAL2 (H1)	+	0.071			0.041			-0.732*		
		(0.24)			(0.26)			(-1.67)		
SPECIAL3 (H1)	+		0.497**			-0.030			0.419	
			(2.15)			(-0.22)			(1.43)	
SPECIAL4 (H1)	+			-0.248			0.243*			0.306
				(-1.09)			(1.77)			(0.93)
NEW (H2)	-	0.156	0.164*	0.156	-0.026	-0.028	-0.024	0.226**	0.227**	0.225**
		(1.62)	(1.70)	(1.62)	(-0.47)	(-0.51)	(-0.44)	(2.15)	(2.17)	(2.15)
FEES (H3)	+	0.000*	0.000*	0.000**	0.000**	0.000**	0.000**	0.000	0.000	0.000
		(1.90)	(1.92)	(1.96)	(2.43)	(2.44)	(2.36)	(0.36)	(0.11)	(0.08)
LAG (H6)	?	0.000	0.001*	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		(1.52)	(1.68)	(1.57)	(0.35)	(0.35)	(0.21)	(1.01)	(1.11)	(0.99)
SOX (H7)	?	0.193**	0.194**	0.197**	0.365***	0.367***	0.365***	0.223**	0.212**	0.217**
		(2.34)	(2.34)	(2.37)	(7.06)	(7.11)	(7.07)	(2.40)	(2.27)	(2.34)
LOWRISK (H9)	+	0.132	0.132	0.132	0.174***	0.173***	0.172***	0.119	0.114	0.118
		(1.18)	(1.19)	(1.19)	(2.60)	(2.58)	(2.56)	(0.92)	(0.88)	(0.91)
GC (H10)	-	0.410	0.407	0.414	-0.952***	-0.968***	-0.952***	-0.824**	-0.789**	-0.822**
		(0.82)	(0.82)	(0.82)	(-2.85)	(-2.90)	(-2.79)	(-2.31)	(-2.20)	(-2.31)
ICFR (H4)	-	0.352***	0.325**	0.355***	-0.021	-0.022	-0.021	0.256	0.248	0.274*
		(2.65)	(2.46)	(2.67)	(-0.25)	(-0.27)	(-0.25)	(1.63)	(1.59)	(1.76)
MNC (H8)	-	0.163	0.183	0.160	0.010	0.012	0.013	-0.010	0.002	-0.023
		(0.57)	(0.64)	(0.56)	(0.05)	(0.07)	(0.07)	(-0.03)	(0.01)	(-0.07)
MARGIN	+	1.258***	1.269***	1.256***	0.455*	0.472*	0.455*	-0.389	-0.374	-0.378
		(3.78)	(3.80)	(3.78)	(1.87)	(1.93)	(1.87)	(-1.27)	(-1.20)	(-1.22)
DEFEXP	+	-0.525	-0.544	-0.512	-1.429***	-1.454***	-1.442***	-0.620	-0.601	-0.631
		(-0.83)	(-0.87)	(-0.81)	(-3.67)	(-3.72)	(-3.71)	(-0.94)	(-0.90)	(-0.95)
GROWTH	?	-0.660***	-0.658***	-0.658***	-0.193*	-0.195*	-0.194*	-0.297**	-0.286**	-0.289**
		(-5.35)	(-5.37)	(-5.35)	(1.89)	(-1.91)	(-1.90)	(-2.12)	(-2.04)	(-2.07)
DEPPROG	-	-0.841***	-0.839***	-0.847***	-0.104	-0.093	-0.097	-1.296***	-1.246***	-1.269***
		(-3.40)	(-3.40)	(-3.41)	(-0.48)	(-0.43)	(-0.45)	(-5.81)	(-5.49)	(-5.68)
DEFREV	+	-0.775	-0.820	-0.819	-0.042	-0.041	0.002	-0.016	0.129	0.120
		(-0.81)	(-0.87)	(-0.86)	(-0.07)	(-0.07)	(0.00)	(-0.01)	(0.08)	(0.08)
PROGCHG	-	-1.809***	-1.789***	-1.801***	0.108	0.108	0.102	-0.840**	-0.834**	-0.848**
		(-5.16)	(-5.07)	(-5.12)	(0.33)	(0.33)	(0.31)	(-2.04)	(-2.04)	(-2.07)
AGE	+	0.024***	0.024***	0.024***	0.021***	0.021***	0.021***	0.017***	0.017***	0.017***
		(5.30)	(5.34)	(5.31)	(8.90)	(8.90)	(8.84)	(2.91)	(2.92)	(2.92)
DONINT	?	1.875***	1.875***	1.861***	3.992***	3.995***	3.990***	4.146***	4.153***	4.241***
		(3.83)	(3.84)	(3.81)	(10.64)	(10.67)	(10.68)	(4.22)	(4.25)	(4.27)
SIZE	+	0.420***	0.437***	0.421***	-0.068	-0.086	-0.076	0.677***	0.676***	0.668***
		(4.27)	(4.38)	(4.28)	(-1.13)	(-1.42)	(-1.28)	(8.31)	(8.42)	(8.29)
STATEGOV	+	0.038*	0.039*	0.038*	0.029**	0.028**	0.029**	0.024	0.026	0.024
		(1.80)	(1.87)	(1.82)	(2.05)	(1.97)	(2.07)	(0.89)	(0.97)	(0.91)
INVMR	?	0.090	0.200	0.100	-0.540***	-0.799***	-0.602***	0.745***	1.042***	0.814***
		(0.45)	(0.73)	(0.46)	(-4.01)	(-4.40)	(-4.14)	(3.75)	(3.94)	(3.86)
Observations		27,494	27,494	27,494	23,430	23,430	23,430	29,780	29,780	29,780
Pseudo R^2		14.71	14.88	14.75	23.71	23.78	23.79	23.32	23.31	23.18

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively.

Table 11
Logistic Regression Model Estimates with Elimination of Observations from 1997

$$FRQ_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} +$$
$$\beta_9 ICFR_{it} + \beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} +$$
$$\beta_{16} PROGCHG_{it} + \beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$$

Variable	Pred. Sign	FRQ1	FRQ2	FRQ3
Constant		-6.326***	0.922	-9.886***
		(-3.35)	(0.76)	(-6.67)
AUDSIZE (H5)	?	-0.017	-0.048	-0.013
		(-0.09)	(-0.44)	(-0.05)
SPECIAL (H1)	+	0.209	0.158	0.192
		(1.22)	(1.54)	(0.90)
NEW (H2)	-	0.154	-0.014	0.224**
		(1.58)	(-0.25)	(2.16)
FEES (H3)	+	0.000*	0.000**	0.000
		(1.82)	(2.40)	(0.03)
LAG (H6)	?	0.001**	0.000	0.000
		(1.97)	(0.32)	(1.20)
SOX (H7)	?	0.172**	0.374***	0.202**
		(2.03)	(7.24)	(2.17)
LOWRISK (H9)	+	0.136	0.180***	0.105
		(1.17)	(2.60)	(0.78)
GC (H10)	-	0.473	-0.941***	-0.811**
		(0.83)	(-2.80)	(-2.18)
ICFR (H4)	-	0.327**	-0.018	0.257
		(2.43)	(-0.22)	(1.64)
MNC (H8)	-	0.161	0.018	-0.054
		(0.54)	(0.09)	(-0.17)
MARGIN	+	1.276***	0.487**	-0.418
		(3.74)	(1.96)	(-1.32)
DEFEXP	+	-0.489	-1.505***	-0.649
		(-0.75)	(-3.80)	(-0.98)
GROWTH	?	-0.691***	-0.210**	-0.347**
		(-5.29)	(-1.97)	(-2.41)
DEPPROG	-	-0.827***	-0.117	-1.278***
		(-3.31)	(0.54)	(-5.65)
DEFREV	+	-0.687	-0.077	0.107
		(-0.69)	(-0.13)	(0.07)
PROGCHG	-	-2.202***	0.087	-0.889**
		(-5.40)	(0.25)	(-2.04)
AGE	+	0.023***	0.022***	0.017***
		(5.02)	(8.99)	(2.89)
DONINT	?	1.942***	3.996***	4.120***
		(3.79)	(10.49)	(4.17)
SIZE	+	0.430***	-0.072	0.673***
		(4.26)	(-1.17)	(8.20)
STATEGOV	+	0.037*	0.030**	0.026
		(1.72)	(2.10)	(0.96)
INVMR	?	0.182	-0.865***	1.188***
		(0.55)	(-3.98)	(3.70)
Observations		25,895	22,024	27,328
Pseudo R^2		15.15	24.17	23.17

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively.

Table 12
Logistic Regression Model Estimates with Alternative Definition of Audit Lag

$$FRQ_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} +$$
$$\beta_9 ICFR_{it} + \beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} +$$
$$\beta_{16} PROGCHG_{it} + \beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$$

Variable	Pred. Sign	FRQ1	FRQ2	FRQ3
Constant		-6.236***	1.083	-10.095***
		(-3.36)	(0.90)	(-6.85)
AUDSIZE (H5)	?	-0.009	-0.025	-0.027
		(-0.05)	(-0.24)	(-0.11)
SPECIAL (H1)	+	0.203	0.163	0.196
		(1.22)	(1.62)	(0.93)
NEW (H2)	-	0.177*	-0.019	0.245**
		(1.86)	(-0.35)	(2.36)
FEES (H3)	+	0.000**	0.000***	0.000
		(1.95)	(2.53)	(0.17)
LAG2 (H6)	?	0.011	-0.006	-0.014
		(0.11)	(-0.09)	(-0.12)
SOX (H7)	?	0.187**	0.364***	0.211**
		(2.26)	(7.04)	(2.27)
LOWRISK (H9)	+	0.126	0.167***	0.114
		(1.13)	(2.49)	(0.88)
GC (H10)	-	0.444	-0.959***	-0.817**
		(0.88)	(-2.93)	(-2.31)
ICFR (H4)	-	0.356***	-0.030	0.267*
		(2.68)	(-0.36)	(1.70)
MNC (H8)	-	0.203	0.021	0.029
		(0.71)	(0.11)	(0.09)
MARGIN	+	1.253***	0.458*	-0.393
		(3.78)	(1.88)	(-1.28)
DEFEXP	+	-0.502	-1.439***	-0.649
		(-0.80)	(-3.68)	(-0.98)
GROWTH	?	-0.655***	-0.187*	-0.290**
		(-5.34)	(-1.83)	(-2.08)
DEPPROG	-	-0.833***	-0.103	-1.258***
		(-3.35)	(-0.48)	(-5.64)
DEFREV	+	-0.778	-0.003	0.084
		(-0.81)	(0.00)	(0.05)
PROGCHG	-	-1.795***	0.096	-0.827**
		(-5.12)	(0.29)	(-2.02)
AGE	+	0.024***	0.021***	0.017***
		5.30	(8.88)	(2.91)
DONINT	?	1.873***	4.002***	4.184***
		3.84	(10.65)	(4.31)
SIZE	+	0.431***	-0.080	0.685***
		(4.35)	(-1.31)	(8.45)
STATEGOV	+	0.042**	0.031**	0.028
		(1.98)	(2.17)	(1.04)
INVMR	?	0.184	-0.893***	1.236***
		(0.57)	(-4.14)	(3.92)
Observations		27,494	23,430	29,780
Pseudo R^2		14.72	23.79	23.22

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively.

Table 13
Logistic Regression Model Estimates with Alternative Definitions of SOX

$$FRQ_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} + \beta_9 ICFR_{it} +$$
$$\beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} + \beta_{16} PROGCHG_{it} +$$
$$\beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$$

Variable	Pred. Sign	FRQ1		FRQ2		FRQ3	
Constant		-6.191***	-6.177***	1.162	1.229	-10.043***	-10.009***
		(-3.34)	(-3.33)	(0.97)	(1.02)	(-6.82)	(-6.81)
AUDSIZE (H5)	?	-0.032	-0.039	-0.013	-0.008	-0.037	-0.044
		(-0.18)	(-0.21)	(-0.12)	(-0.07)	(-0.15)	(-0.18)
SPECIAL (H1)	+	0.207	0.209	0.167*	0.166*	0.201	0.203
		(1.25)	(1.26)	(1.66)	(1.65)	(0.95)	(0.96)
NEW (H2)	-	0.162*	0.162*	-0.011	-0.008	0.229**	0.226**
		(1.69)	(1.69)	(-0.21)	(-0.15)	(2.21)	(2.18)
FEES (H3)	+	0.000**	0.000**	0.000**	0.000**	0.000	0.000
		(1.94)	(1.94)	(2.43)	(2.38)	(0.15)	(0.15)
LAG (H6)	?	0.000	0.000	0.000	0.000	0.000	0.000
		(1.53)	(1.51)	(0.36)	(0.34)	(1.02)	(1.00)
SOX2 (H7)	?	0.150*		0.403***		0.209**	
		(1.79)		(7.83)		(2.24)	
SOX3 (H7)	?		0.126		0.428***		0.177*
			(1.42)		(8.10)		(1.84)
LOWRISK (H9)	+	0.132	0.133	0.161**	0.160**	0.117	0.119
		(1.18)	(1.19)	(2.39)	(2.37)	(0.90)	(0.91)
GC (H10)	-	0.400	0.397	-0.954***	-0.961***	-0.842**	-0.831**
		(0.80)	(0.80)	(-2.89)	(-2.92)	(-2.37)	(-2.34)
ICFR (H4)	-	0.337***	0.334***	-0.049	-0.064	0.248	0.243
		(2.53)	(2.51)	(-0.59)	(-0.77)	(1.58)	(1.55)
MNC (H8)	-	0.173	0.171	0.023	0.017	0.000	0.001
		(0.60)	(0.59)	(0.12)	(0.09)	(0.00)	(0.00)
MARGIN	+	1.235***	1.211***	0.388	0.309	-0.384	-0.398
		(3.75)	(3.70)	(1.61)	(1.29)	(-1.25)	(-1.30)
DEFEXP	+	-0.514	-0.513	-1.442***	-1.435***	-0.637	-0.624
		(-0.81)	(-0.81)	(-3.68)	(-3.65)	(-0.96)	(-0.94)
GROWTH	?	-0.660***	-0.653***	-0.189*	-0.169*	-0.300**	-0.294**
		(-5.38)	(-5.35)	(-1.84)	(-1.66)	(-2.15)	(-2.11)
DEPPROG	-	-0.841***	-0.836***	-0.094	-0.088	-1.257***	-1.253***
		(-3.39)	(-3.37)	(-0.44)	(-0.41)	(-5.66)	(-5.63)
DEFREV	+	-0.771	-0.775	0.033	0.036	0.095	0.103
		(-0.81)	(-0.81)	(0.06)	(0.06)	(0.06)	(0.07)
PROGCHG	-	-1.794***	-1.792***	0.113	0.119	-0.833**	-0.833**
		(-5.12)	(-5.13)	(0.35)	(0.36)	(-2.04)	(-2.04)
AGE	+	0.024***	0.024***	0.021***	0.021***	0.017***	0.017***
		(5.33)	(5.34)	(8.85)	(8.82)	(2.93)	(2.95)
DONINT	?	1.885***	1.887***	4.027***	4.035***	4.175***	4.174***
		(3.86)	(3.86)	(10.69)	(10.69)	(4.31)	(4.31)
SIZE	+	0.425***	0.426***	-0.084	-0.086	0.679***	0.679***
		(4.28)	(4.29)	(-1.38)	(-1.41)	(8.34)	(8.35)
STATEGOV	+	0.041**	0.041**	0.031**	0.031**	0.028	0.027
		(1.94)	(1.94)	(2.19)	(2.20)	(1.03)	(1.02)
INVMR	?	0.173	0.174	-0.897***	-0.898***	1.234***	1.232***
		(0.53)	(0.54)	(-4.15)	(-4.16)	(3.92)	(3.92)
Observations		27,494	27,494	23,430	23,430	29,780	29,780
Pseudo R^2		14.74	14.72	23.90	23.94	23.24	23.21

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively.

Table 14
Logistic Regression Model Estimates for Alternative Specification of FRQ2

$$FRQ2_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} + $$
$$\beta_9 ICFR_{it} + \beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} + $$
$$\beta_{16} PROGCHG_{it} + \beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$$

Variable	Pred. Sign	FRQ2-$50,000	FRQ2-$1	FRQ2-$100,000
Constant		3.302***	-0.759	4.922***
		(2.50)	(-0.69)	(3.56)
AUDSIZE (H5)	?	0.035	-0.054	0.038
		(0.32)	(-0.51)	(0.33)
SPECIAL (H1)	+	0.164	0.157	0.137
		(1.57)	(1.61)	(1.28)
NEW (H2)	-	-0.016	-0.009	-0.006
		(-0.28)	(-0.18)	(-0.10)
FEES (H3)	+	0.000***	0.000**	0.000***
		(2.71)	(2.23)	(2.77)
LAG (H6)	?	0.000	0.000	0.000
		(0.39)	(0.35)	(0.53)
SOX (H7)	?	0.440***	0.343***	0.446***
		(8.10)	(6.84)	(7.88)
LOWRISK (H9)	+	0.149**	0.168***	0.122*
		(2.12)	(2.58)	(1.65)
GC (H10)	-	-0.977***	-0.932***	-0.912***
		(-2.94)	(-2.87)	(-2.68)
ICFR (H4)	-	-0.071	-0.027	-0.079
		(-0.83)	(-0.34)	(-0.88)
MNC (H8)	-	-0.005	0.053	-0.012
		(-0.02)	(0.28)	(-0.06)
MARGIN	+	0.584**	0.489**	0.629**
		(2.34)	(2.06)	(2.47)
DEFEXP	+	-1.547***	-1.394***	-1.563***
		(-3.90)	(-3.60)	(-3.84)
GROWTH	?	-0.201*	-0.237**	-0.208*
		(-1.88)	(-2.41)	(-1.88)
DEPPROG	-	-0.115	-0.155	-0.092
		(-0.49)	(-0.76)	(-0.36)
DEFREV	+	-0.218	0.017	-0.123
		(-0.35)	(0.03)	(-0.19)
PROGCHG	-	0.138	0.144	0.177
		(0.41)	(0.45)	(0.49)
AGE	+	0.019***	0.023***	0.018***
		(7.77)	(9.63)	(6.93)
DONINT	?	3.086***	4.638***	2.433***
		(9.17)	(11.51)	(7.80)
SIZE	+	-0.188***	0.012	-0.261***
		(-2.83)	(0.21)	(-3.78)
STATEGOV	+	0.028*	0.032**	0.025*
		(1.87)	(2.34)	(1.67)
INVMR	?	-1.001***	-0.788***	-1.098***
		(-4.28)	(-3.87)	(-4.47)
Observations		22,508	24,261	21,911
Pseudo R^2		20.46	26.92	18.25

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively.

Table 15
Logistic Regression Model Estimates with Inclusion of ICMP Variable

$$FRQ_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 LOWRISK_{it} + \beta_7 GC_{it} + \beta_8 ICFR_{it} +$$
$$\beta_9 ICMP_{it} + \beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} +$$
$$\beta_{16} PROGCHG_{it} + \beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$$

Variable	Pred. Sign	FRQ1	FRQ2	FRQ3
Constant		-5.871***	1.223	-9.806***
		(-2.90)	(0.94)	(-6.30)
AUDSIZE (H5)	?	-0.191	-0.132	-0.167
		(-0.91)	(-1.13)	(-0.57)
SPECIAL (H1)	+	0.218	0.162	0.149
		(1.19)	(1.49)	(0.67)
NEW (H2)	-	0.168	-0.012	0.290**
		(1.46)	(-1.18)	(2.24)
FEES (H3)	+	0.000**	0.000**	0.000
		(1.99)	(2.12)	(-0.02)
LAG (H6)	?	0.001**	0.000	0.001
		(2.10)	(-0.22)	(1.29)
LOWRISK (H9)	+	0.179	0.200***	0.059
		(1.35)	(2.63)	(0.37)
GC (H10)	-	0.503	-1.072***	-0.906**
		(0.63)	(-2.79)	(-2.20)
ICFR (H4)	-	0.254*	0.038	0.335*
		(1.74)	(0.39)	(1.91)
ICMP	-	0.179	0.017	0.100
		(1.18)	(0.17)	(0.52)
MNC (H8)	-	-0.026	-0.063	-0.074
		(-0.07)	(-0.29)	(-0.22)
MARGIN	+	1.140***	0.493*	-0.593*
		(2.94)	(1.76)	(-1.70)
DEFEXP	+	-0.755	-1.639***	-0.626
		(-1.24)	(-3.86)	(-0.87)
GROWTH	?	-0.630***	-0.225*	-0.423***
		(-4.24)	(-1.77)	(-2.58)
DEPPROG	-	-0.852***	-0.013	-1.288***
		(-3.38)	(-0.06)	(-5.46)
DEFREV	+	-1.013	0.050	-0.409
		(-1.07)	(0.08)	(-0.24)
PROGCHG	-	-1.920***	-0.028	-0.604
		(-4.52)	(-0.07)	(-1.24)
AGE	+	0.023***	0.022***	0.019***
		(4.70)	(8.75)	(2.95)
DONINT	?	2.008***	4.150***	4.214***
		(3.26)	(9.60)	(3.51)
SIZE	+	0.418***	-0.073	0.685***
		(3.90)	(-1.11)	(7.90)
STATEGOV	+	0.035	0.036**	0.024
		(1.57)	(2.41)	(0.82)
INVMR	?	0.124	-0.877***	1.268***
		(0.34)	(-3.77)	(3.53)
Observations		19,780	16,854	20,850
Pseudo R^2		15.30	24.75	24.74

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively.
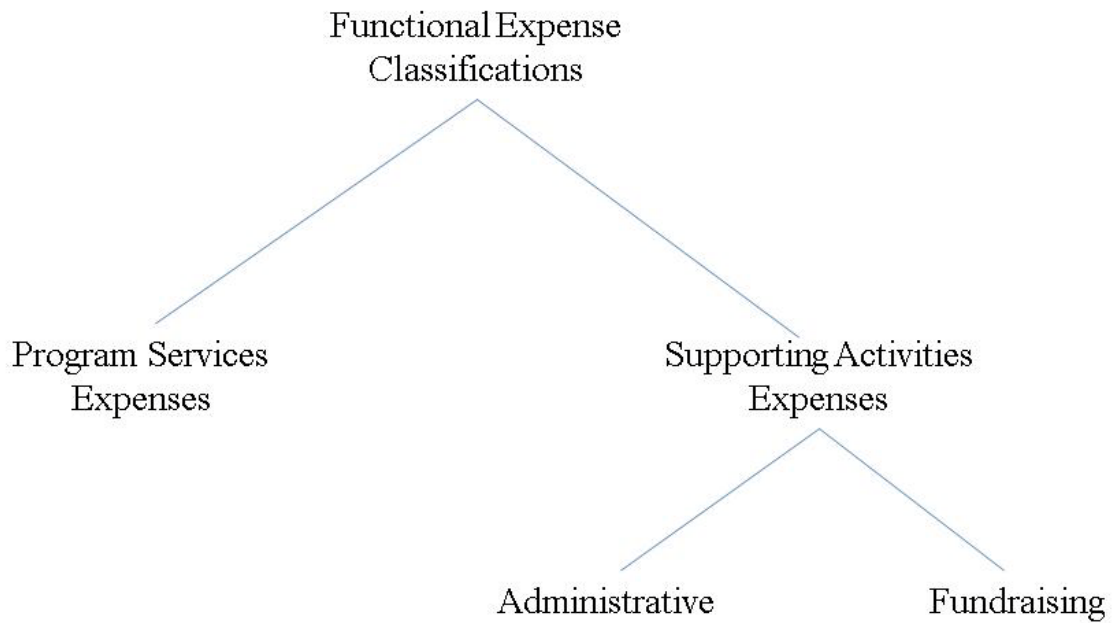
Table 16
Logistic Regression Model Estimates for Additional Specifications of FRQ

$$FRQ2_{it} = \beta_0 + \beta_1 AUDSIZE_{it} + \beta_2 SPECIAL_{it} + \beta_3 NEW_{it} + \beta_4 FEES_{it} + \beta_5 LAG_{it} + \beta_6 SOX_{it} + \beta_7 LOWRISK_{it} + \beta_8 GC_{it} +$$
$$\beta_9 ICFR_{it} + \beta_{10} MNC_{it} + \beta_{11} MARGIN_{it} + \beta_{12} DEFEXP_{it} + \beta_{13} GROWTH_{it} + \beta_{14} DEPPROG_{it} + \beta_{15} DEFREV_{it} +$$
$$\beta_{16} PROGCHG_{it} + \beta_{17} AGE_{it} + \beta_{18} DONINT_{it} + \beta_{19} SIZE_{it} + \beta_{20} STATEGOV_{it} + \beta_{21} INVMR_{it} + \beta_{22} INDUSTRY_{it} + \varepsilon_{it}$$

Variable	Pred. Sign	FRQ4	FRQ5
Constant	?	49.898***	36.402***
		(7.69)	(4.33)
AUDSIZE (H5)	?	0.337	0.780**
		0.91	(2.05)
SPECIAL (H1)	+	-0.011	-0.055
		(-0.04)	(0.17)
NEW (H2)	-	0.525**	0.321
		(2.31)	(1.22)
FEES (H3)	+	0.000**	0.000
		(2.35)	(0.73)
LAG (H6)	?	0.000	0.001
		(0.04)	(0.93)
SOX (H7)	?	-0.064	-0.035
		(-0.38)	(-0.15)
LOWRISK (H9)	+	0.395*	-0.008
		(1.67)	(-0.03)
GC (H10)	-	†	0.927
			(0.79)
ICFR (H4)	-	-0.114	-0.283
		(-0.47)	(-1.16)
MNC (H8)	-	-0.439	††
		(-0.51)	
MARGIN	+	-0.786	0.664
		(-0.84)	(0.55)
DEFEXP	+	-0.258	-0.374
		(-0.21)	(-0.27)
GROWTH	?	-0.928***	0.793*
		(-2.83)	(1.85)
DEPPROG	-	-0.868	-1.431**
		(-1.05)	(-1.96)
DEFREV	+	-3.590	-2.939
		(-1.64)	(-1.02)
PROGCHG	-	3.123**	-6.272***
		(2.38)	(-5.04)
AGE	+	0.008	0.017**
		(1.04)	(2.35)
DONINT	?	-5.570***	-0.940
		(-6.76)	(-0.67)
SIZE	+	-2.367***	-1.861***
		(-7.52)	(-4.76)
STATEGOV	+	0.011	0.042
		(0.17)	(0.82)
INVMR	?	-1.308	2.248
		(-0.87)	(0.83)
Observations		18,051	28,238
Pseudo R^2		53.38	47.77

Note: The models are logit with coefficient estimates and z-statistics (in parentheses) presented. All the z-statistics are based on heteroskedasticity-corrected standard errors and clustering procedure by each firm (Rogers 1993). Industry dummies are included but not reported. *, **, and *** represent two-tailed significance at the .10, .05, and .01 levels, respectively. † GC=0 predicts success perfectly, 57 observations dropped in Stata. †† MNC=0 predicts success perfectly, 472 observations dropped in Stata.

APPENDIX A: Calculation of the Program Ratio

Functional Expense
Classifications

Program Services
Expenses

Supporting Activities
Expenses

Administrative

Fundraising

$$\text{Program Ratio} = \frac{\text{Program Expenses}}{\text{Program Exp.} + \text{Administrative Exp.} + \text{Fundraising Exp.}}$$

APPENDIX B: GAAP for Nonprofits

The FASB is the primary standard-setter for NPOs. NPOs must follow GAAP, including

supplemental GAAP written specifically to address NPO issues. The following FASB

statements apply only to NPOs:

- SFAS No. 93, "Recognition of Depreciation by Nor-for-Profit Organization" (Norwalk, CT, 1987). Summary: "This Statement requires all not-for-profit organizations to recognize the cost of using up long-lived tangible assets—depreciation—in general-purpose external financial statements. However, depreciation need not be recognized for certain works of art and certain historical treasures. The Statement also extends to not-for-profit organizations the requirements of APB Opinion No. 12, *Omnibus Opinion—1967*, to disclose information about depreciable assets and depreciation.

   This Statement does not cover matters of financial statement display, recognition of assets, or measurement, such as how to measure the amount of depreciation to be recognized for a particular period.

   This Statement is effective for financial statements issued for fiscal years beginning after May 15, 1988, with earlier application encouraged."

- SFAS No. 116, "Accounting for Contributions Received and Contributions Made" (Norwalk, CT, 1993). Summary: "This Statement establishes accounting standards for contributions and applies to all entities that receive or make contributions. Generally, contributions received, including unconditional promises to give, are recognized as revenues in the period received at their fair values. Contributions made, including unconditional promises to give, are recognized as expenses in the period made at their fair values. Conditional promises to give, whether received or made, are recognized when they become unconditional, that is, when the conditions are substantially met.

   This Statement requires not-for-profit organizations to distinguish between contributions received that increase permanently restricted net assets, temporarily restricted net assets, and unrestricted net assets. It also requires recognition of the expiration of donor-imposed restrictions in the period in which the restrictions expire.

   This Statement allows certain exceptions for contributions of services and works of art, historical treasures, and similar assets. Contributions of services are recognized only if the services received (a) create or enhance nonfinancial assets or (b) require specialized skills, are provided by individuals possessing those skills, and would typically need to be purchased if not provided by donation. Contributions of works of art, historical treasures, and similar assets need not be recognized as revenues and capitalized if the donated items are added to collections held for public exhibition, education, or research in furtherance of public service rather than financial gain.

This Statement requires certain disclosures for collection items not capitalized and for receipts of contributed services and promises to give.

This Statement is effective for financial statements issued for fiscal years beginning after December 15, 1994, except for not-for-profit organizations with less than $5 million in total assets and less than $1 million in annual expenses. For those organizations, the Statement is effective for fiscal years beginning after December 15, 1995. Earlier application is encouraged. This Statement may be applied either retroactively or by recognizing the cumulative effect of the change in the year of the change. The provisions for recognition of expirations of restrictions may be applied prospectively."

- SFAS No. 117, "Financial Statements of Not-for-Profit Organizations" (Norwalk, CT, 1993). Summary: "This Statement establishes standards for general-purpose external financial statements provided by a not-for-profit organization. Its objective is to enhance the relevance, understandability, and comparability of financial statements issued by those organizations. It requires that those financial statements provide certain basic information that focuses on the entity as a whole and meets the common needs of external users of those statements.

  This Statement requires that all not-for-profit organizations provide a statement of financial position, a statement of activities, and a statement of cash flows. It requires reporting amounts for the organization's total assets, liabilities, and net assets in a statement of financial position; reporting the change in an organization's net assets in a statement of activities; and reporting the change in its cash and cash equivalents in a statement of cash flows.

  This Statement also requires classification of an organization's net assets and its revenues, expenses, gains, and losses based on the existence or absence of donor-imposed restrictions. It requires that the amounts for each of three classes of net assets—permanently restricted, temporarily restricted, and unrestricted—be displayed in a statement of financial position and that the amounts of change in each of those classes of net assets be displayed in a statement of activities.

  This Statement amends FASB Statement No. 95, *Statement of Cash Flows*, to extend its provisions to not-for-profit organizations and to expand its description of cash flows from financing activities to include certain donor-restricted cash that must be used for long-term purposes. It also requires that voluntary health and welfare organizations provide a statement of functional expenses that reports expenses by both functional and natural classifications. This Statement is effective for annual financial statements issued for fiscal years beginning after December 15, 1994, except for organizations with less than $5 million in total assets and less than $1 million in annual expenses. For those organizations, the Statement is effective for fiscal years beginning after December 15, 1995. Earlier application is encouraged."

- SFAS No. 124, "Accounting for Certain Investments Held by Nor-for-Profit Organizations" (Norwalk, CT, 1995). Summary: "This Statement establishes standards for accounting for certain investments held by not-for-profit organizations. It requires that investments in equity securities with readily determinable fair values and all investments in debt securities be reported at fair value with gains and losses included in a statement of activities. This Statement requires certain disclosures about investments held by not-for-profit organizations and the return on those investments.

This Statement also establishes standards for reporting losses on investments held because of a donor's stipulation to invest a gift in perpetuity or for a specified term.

This Statement is effective for annual financial statements issued for fiscal years beginning after December 15, 1995. Earlier application is encouraged. This Statement is applied either by restating the financial statements of all prior years presented or by recognizing the cumulative effect of the change in the year of the change. The expiration of restrictions on previously unrecognized net gains may be recognized prospectively."

- SFAS No. 136, "Transfers of Assets to a Not-for-Profit Organization or Charitable Trust That Raises or Holds Contributions for Others" (Norwalk, CT, 1999). Summary: "This Statement establishes standards for transactions in which an entity—the *donor*—makes a contribution by transferring assets to a not-for-profit organization or charitable trust—the *recipient organization*—that accepts the assets from the donor and agrees to use those assets on behalf of or transfer those assets, the return on investment of those assets, or both to another entity—the *beneficiary*—that is specified by the donor. It also establishes standards for transactions that take place in a similar manner but are not contributions because the transfers are revocable, repayable, or reciprocal.

  This Statement requires a recipient organization that accepts cash or other financial assets from a donor and agrees to use those assets on behalf of or transfer those assets, the return on investment of those assets, or both to a specified unaffiliated beneficiary to recognize the fair value of those assets as a liability to the specified beneficiary concurrent with recognition of the assets received from the donor. However, if the donor explicitly grants the recipient organization variance power or if the recipient organization and the specified beneficiary are financially interrelated organizations, the recipient organization is required to recognize the fair value of any assets it receives as a contribution received. Not-for-profit organizations are financially interrelated if (a) one organization has the ability to influence the operating and financial decisions of the other and (b) one organization has an ongoing economic interest in the net assets of the other.

  This Statement does not establish standards for a trustee's reporting of assets held on behalf of specified beneficiaries, but it does establish standards for a beneficiary's reporting of its rights to assets held in a charitable trust.

  This Statement requires that a specified beneficiary recognize its rights to the assets held by a recipient organization as an asset unless the donor has explicitly granted the recipient organization variance power. Those rights are either an interest in the net assets of the recipient organization, a beneficial interest, or a receivable. If the beneficiary and the recipient organization are financially interrelated organizations, the beneficiary is required to recognize its interest in the net assets of the recipient organization and adjust that interest for its share of the change in net assets of the recipient organization. If the beneficiary has an unconditional right to receive all or a portion of the specified cash flows from a charitable trust or other identifiable pool of assets, the beneficiary is required to recognize that beneficial interest, measuring and subsequently remeasuring it at fair value, using a valuation technique such as the present value of the estimated expected future cash flows. If the recipient organization is explicitly granted variance power, the specified beneficiary does not recognize its potential for future distributions from the assets held by the recipient organization. In all other cases, a beneficiary recognizes its rights as a receivable.

  This Statement describes four circumstances in which a transfer of assets to a recipient

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organization is accounted for as a liability by the recipient organization and as an asset by the resource provider because the transfer is revocable or reciprocal. Those four circumstances are if (a) the transfer is subject to the resource provider's unilateral right to redirect the use of the assets to another beneficiary, (b) the transfer is accompanied by the resource provider's conditional promise to give or is otherwise revocable or repayable, (c) the resource provider controls the recipient organization and specifies an unaffiliated beneficiary, or (d) the resource provider specifies itself or its affiliate as the beneficiary and the transfer is not an equity transaction. If the transfer is an equity transaction and the resource provider specifies itself as beneficiary, it records an interest in the net assets of the recipient organization (or an increase in a previously recognized interest). If the resource provider specifies an affiliate as beneficiary, the resource provider records an equity transaction as a separate line item in its statement of activities, and the affiliate named as beneficiary records an interest in the net assets of the recipient organization. The recipient organization records an equity transaction as a separate line item in its statement of activities.

This Statement requires certain disclosures if a not-for-profit organization transfers assets to a recipient organization and specifies itself or its affiliate as the beneficiary or if it includes in its financial statements a ratio of fundraising expenses to amounts raised.

This Statement incorporates without reconsideration the guidance in FASB Interpretation No. 42, *Accounting for Transfers of Assets in Which a Not-for-Profit Organization Is Granted Variance Power,* and supersedes that Interpretation.

This Statement is effective for financial statements issued for fiscal periods beginning after December 15, 1999, except for the provisions incorporated from Interpretation 42, which continue to be effective for fiscal years ending after September 15, 1996. Earlier application is encouraged. This Statement may be applied either by restating the financial statements of all years presented or by recognizing the cumulative effect of the change in accounting principle in the year of the change."

APPENDIX C: Auditor Choice Model

The following nonprofit auditor choice model is based on the model used in Kitching (2007) and Kitching (2009):

$$AUDITOR = \varphi_0 + \varphi_1 DEBT + \varphi_2 SIZE + \varphi_3 RCI + \varphi_4 PROF + \varphi_5 DUES + \varphi_6 INDSUP$$

AUDITOR is an indicator variable which takes a value of 1 if the organization selected a Big N auditor, a specialist auditor, or both, and 0 otherwise.[60]
DEBT is total liabilities to total assets.
SIZE is the natural log of total assets.
RCI is the revenue concentration index (see below).

$$RCI = \left(\frac{Direct\ Support}{Revenue}\right)^2 + \left(\frac{Indirect\ Support}{Revenue}\right)^2 + \left(\frac{Gov\ Grant}{Revenue}\right)^2 + \left(\frac{Dues}{Revenue}\right)^2 + \left(\frac{Program\ Income}{Revenue}\right)^2 + \left(\frac{Oth\ Rev}{Revenue}\right)^2$$

PROF is an indicator variable equal to one if the organization hires a professional fundraiser and zero otherwise.
DUES is the proportion of membership fees and dues to revenue.
INDSUP is equal to one if the organization receives indirect support from a supporting organization such as the United Way.

See Kitching (2007) for explanation of the motivation for including the above nonprofit audit choice factors.

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[60] Payne (2008) notes that characteristics that motivate the selection of a Big N auditor are similar to those that motivate the selection of a specialist auditor.