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Public mandates, market monitoring, and nonprofit financial disclosures

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ABSTRACT

Public officials have recently sought increased regulation of financial disclosures from not-for-profit organizations as a means of improving accountability with the public. One objective of this study is to examine whether not-for-profit entities already subject to audit requirements submit financial reports in compliance with GAAP. Further, since the majority of not-for-profit organizations are not subject to public audit mandates, this study also ascertains whether other market actors such as donors monitor and demand accrual-based financial information. The empirical analyses indicate that not-for-profit organizations subject to public audit mandates are largely in compliance with GAAP, although a significant minority of organizations subject to state requirements is not; further analyses suggest that external oversight significantly influence the use of accrual reporting. Models are also tested on a subsample of not-for-profits that switched from cash to accrual reporting, with the results suggesting that increasing public and market oversight have a significant effect on the decision to switch methods. The overall results suggest that public and market actors demand accrual-based financial reporting from not-for-profit organizations.

1. Introduction

This paper examines the determinants of the use of the cash and accrual bases of accounting in required financial disclosures by nonprofit organizations (NPOs) in the United States. Demand for accrual-based reporting in the private sector is well-established (Dechow, 1994), and some public officials have recently sought more accrual-based disclosures from NPOs. This paper examines public

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mandates requiring certain NPOs to issue audited financial statements, and also analyzes market monitoring that may influence the use of the cash or accrual accounting method in these disclosures. This choice of accounting basis in financial reporting by NPOs has not been the focus of study in the existing literature.

One objective of this study is to ascertain whether NPOs subject to public audit requirements submit their required financial disclosures on the accrual basis as such mandates intend. Citizen and politician calls for increased accountability from NPOs often include proposals for increased financial reporting requirements. Whether existing mandates are even successful at increasing the use of accrual disclosures has not been explored, and this study seeks to inform this ongoing policy debate.

The majority of NPOs are not currently subject to public audit mandates, yet a majority still reports on the accrual basis. This paper is also motivated by the theory that external stakeholders beyond government may monitor and demand accrual-based financial information from NPOs. In addition to public mandates, NPOs face "market oversight" from donors and those engaged in transactional relationships.

The empirical analysis first examines the extent to which NPOs subject to mandatory audit requirements report their financial disclosures on the accrual basis. It is expected that organizations subject to public audit requirements are likely to report in compliance with generally accepted accounting principles (GAAP) on the accrual basis. This expectation is largely supported by the results, although a significant minority of NPOs subject to state audit requirements (in their own state or other states) actually reports on the cash basis.

For NPOs not subject to any public mandates, a model is tested in which market oversight variables are included to ascertain which factors influence the use of cash or accrual reporting between organizations. After controlling for organizational characteristics, the empirical analysis indicates that accrual reporting increases significantly in the presence of donor restricted gifts to NPOs, providing evidence that external oversight is useful in predicting the accounting method used in financial disclosures. This analysis also examines the effects of specific Attorney General oversight powers (beyond audit requirements) on NPO financial reporting, finding that "detection" powers are associated with increased accrual-based reporting, while "prosecution" powers are not. The results suggest a more nuanced reality than one in which smaller organizations simply use cash reporting while larger organizations use accrual, associated at least in part with existing oversight regimes.

Finally, models are tested on a sample of NPOs that switched from cash to accrual reporting to ascertain the factors that changed and may have influenced this organizational decision. This analysis examines whether public or market oversight changed, or whether the change was derived from organizational characteristics only. The findings suggest that increasing external oversight from both public and market actors have a nontrivial effect on the decision to switch accounting methods, and are not simply a function of organizational characteristics.

This paper informs and advances the literature in three ways. First, the findings indicate that current public mandates related to nonprofit financial reporting largely have the intended effects on the information disclosed. These findings expand the nonprofit accountability and legal literature (for example, Keating and Frumkin, 2003; Fremont-Smith, 2004; Irvin, 2005) by showing a link between these public oversight regimes and the use of accrual-based financial information made public by NPOs. Further, the findings are informative for policies regarding increased financial reporting requirements for the sector. Second, certain types of donors (those willing to restrict gifts) do seem to influence the accounting method used by NPOs, suggesting that this important nonprofit stakeholder desires accrual-based financial information. Finally, the data used are more comprehensive and representative of the sector than that used in many prior studies. Further, the data are able to distinguish between restricted and unrestricted net assets – a core feature of the nonprofit financial reporting model; such information has been largely unavailable in the past.

The remainder of this paper is organized as follows. Section 2 outlines the demand for nonprofit financial disclosures by public officials. Section 3 describes factors that potentially influence the use of accrual reporting in NPOs. Section 4 describes the data, while Section 5 defines the variables used in the empirical analyses. Section 6 contains the empirical analyses, discussions of these analyses, and robustness tests of these analyses. Section 7 concludes.

2. The demand for financial disclosures from nonprofits by public officials

The federal government currently has no audit requirements for NPOs in general. Rather, state governments have the authority to require and enforce audit requirements for public charities within their states. In the wake of Sarbanes–Oxley legislation aimed at improving the financial reporting of publicly traded corporations, many state Attorneys General (including those in Texas, California, New York, and Hawaii, among others) proposed similar types of legislation aimed at public charities.[1] Among the changes frequently sought were mandated audited financial information (Fremont-Smith, 2007). Proponents believe that subjecting NPOs to such audit requirements will increase the accountability of these organizations to the public and enhance their own enforcement powers to prevent financial fraud within the nonprofit sector.

While state Attorneys General have sought increased audited financial information from nonprofits under their jurisdictions, few legislatures have passed such legislation. Manny (2007) notes that state enforcement of charitable fiduciary duties are problematic because Attorneys General are expected to focus on more significant issues, charities often have politically important board members, increasing the enforcement of charities' duties is not politically popular, state regulatory offices are understaffed and additional resources are rarely provided, among other reasons. Given these realities, some legislatures are hesitant to expand Attorney General oversight powers with respect to NPOs.

At the federal level, the Senate Finance Committee in 2006 recommended a series of changes to federal oversight of public charities. Specifically related to financial disclosures, the committee recommended improvements to the Form 990 to increase comparability, mandatory financial audits for public charities and disclosure of these audits, and that oversight of charities shift from the states to the federal government (Fremont-Smith, 2007).[2] Both the Senate Finance Committee recommendations as well as the state Attorneys General's proposals are indicative of government regulators' demand for increased regulation of financial disclosures from NPOs as a means of overseeing NPOs and improving accountability with the public.

2.1. The benefits and costs of regulating financial disclosures by NPOs

Baber and Gore (2008) suggest that financial disclosure regulation may potentially increase public benefits. Applying their argument to NPOs, regulating financial disclosures by requiring audits can influence "search and transaction costs" for donors as well as other stakeholders. By requiring NPOs to act cooperatively (rather than leaving the decision to the organization), such mandates influence "information spillover" – a positive externality. Since donors have been shown to use financial information in their decision to make contributions (Gordon and Khumawala, 1999), this suggests that donors may benefit from more comparable information based on GAAP, thereby improving the donation allocation process. With respect to accountability, GASB 34 required state and local governments to report their government-wide financial statements on the accrual basis rather than on their financial resources only. Requiring accrual reporting was believed to provide citizens and other stakeholders more information to assess governmental activities and hold public entities accountable. A similar case may be applicable to NPOs.

In addition, advocates of such mandates may believe such requirements not only commit organizations to regularly disclose information to the public, but also commits regulators to enforcement of such mandates (Baber and Gore, 2008). In the case of NPOs, public audit mandates may reduce opportunistic information disclosure by requiring an external audit firm to attest to the information disclosed.

[1] Attorneys General in Ohio and Washington, DC sought changes to existing administrative code rather than new legislation.

[2] While the IRS entertained discussions about increasing the GAAP-compliance of the Form 990 during its redesign in 2007–2008, it ultimately chose not to conform the Form 990 to GAAP, in part because the IRS did not wish to impose the associated costs on NPOs – similar to the reasoning some states have for not requiring GAAP-reporting from municipalities (Baber and Gore, 2008). The IRS has indicated that it intends to continue studying how better to align the Form 990 with GAAP. This information is partially based on communications with a former member of the IRS's Advisory Committee on Tax Exempt and Government Entities who was involved in the redesign of the Form 990. This information is also included in the IRS's Background Paper "Form 990 Redesign for Tax Year 2008" on page 6.

GAAP-compliant disclosures are more costly than cash-based ones (Pinnuck and Potter, 2009), and these financial reporting costs are unassociated with direct program provision in NPOs. Accrual reporting of financial information, then, decreases an organization's "efficiency ratio" (the ratio of total revenues to program expenses), especially since external funding for such organizational infrastructure is rare (Hager et al., 2004). Research shows that donors reduce support for those organizations with overhead rates deemed excessive, and the effect is more pronounced for more donative NPOs (Tinkelman and Mankaney, 2007). Accrual-based financial disclosures by NPOs may not simply increase overhead costs, then; they may also negatively influence total revenues.

3. Factors influencing the use of accrual basis in financial disclosures by NPOs

The majority of NPOs report their required financial disclosures on an accrual basis, and the majority of financial resources are measured on the accrual basis, despite sometimes-weak public oversight and rare punishments for lack of compliance. Accrual-based financial information has been predicted for organizations facing increased monitoring from external stakeholders (Pinnuck and Potter, 2009); this demand from external monitors may be applicable to NPOs as well.

3.1. Oversight of financial disclosures by donors

After providing a donation to a NPO, donors cannot remove the gift. Just as Zimmerman (1977) hypothesizes that individual taxpayers have little incentive to monitor municipal officials via high quality financial information (since the individual taxpayer would be unable to capture the full benefits of such monitoring), the average donor may face a similar disincentive: Once a donor gives to a NPO, he or she faces little incentive to demand financial information for monitoring purposes. On the other hand, donations restricted as to use or purpose by donors (which are frequently large) may result in additional oversight to ensure that his or her gift to the organization is properly used. While any donor can require a NPO to report on an accrual basis as a condition of a gift (Greenlee and Keating, 2004), only donors with a monitoring incentive are likely to demand such information.[3] It is predicted, therefore, that NPOs with donor-restricted net assets are more likely to report public financial information on the accrual basis.

3.2. State Attorneys General oversight of NPO financial disclosures

State Attorneys General have been thought to monitor NPOs in the absence of shareholder oversight (Fisman and Hubbard, 2005). Rather than this oversight being total regulatory authority over NPOs, the primary role of Attorneys General is to safeguard the public assets entrusted to NPOs. This duty is exercised primarily by ensuring abuses of fiduciary responsibilities (by trustees) are corrected, and that fundraising is not conducted deceptively or fraudulently (Fremont-Smith, 2004). Specifically related to financial disclosures, some Attorneys General require annual submission of the federal Form 990, some require audited financial statements at specific thresholds, and some states require no registration or financial information from organizations at all (Fremont-Smith, 2004). Irvin (2005) documents that this between-state variation of Attorney General requirements is related to (among other factors) revenue generation for the state, possible distrust of other states' oversight of NPOs, and the retention of public assets within states (specifically, that increased costs of donation solicitation in one state will dissuade out-of-state NPOs from seeking in-state donations, effectively keeping resources within the state for its own NPOs).

From a disclosure standpoint, the demand for audited financial information will depend upon where a NPO is registered, how the organization obtains its revenues, and whether the organization has reached an established audit threshold.[4] Two predictions are made regarding state oversight of

[3] A NPO might decide not to accept a donation conditioned upon the organization changing its accounting basis of reporting unless the gift were large enough to the organization.

[4] Any NPO that solicits donations in a state is subject to oversight by that state's Attorney General, even if the NPO is not physically located within the state. This point is expanded upon in the empirical specification.

NPOs with respect to financial reporting. First, NPOs located within states with increased Attorney General oversight of nonprofits are more likely to report public financial information on the accrual basis. Second, NPOs that are required to submit audited financial statements to the state Attorney General are more likely to report public financial information on the accrual basis.

3.3. Federal government oversight of NPO financial disclosures

The Office of Management and Budget (OMB) requires that organizations with federal grants comply with OMB Circular A-133. This regulation requires a nonprofit that expends $300,000 or more in federal dollars to undergo a financial audit. The audit requirement of OMB A-133 may influence the use of accrual financial reporting since cash reporting results in a qualified audit opinion letter. Since the Single Audit Act requires a corrective action plan for any such findings (Keating et al., 2005), an organization with cash reporting would have to correct this audit finding to comply with existing regulations. It is predicted that NPOs subject to OMB A-133 audit requirements are more likely to report financial information on the accrual basis.

3.4. Oversight of NPO financial disclosures by other external parties

The nonprofit sector derives a significant portion of revenues from earned income, either through fee-for-services, contracting, or investments. "Commercial nonprofits" (those NPOs that generate a significant portion of their revenues from nondonative sources) may face oversight from clients, contracting parties, vendors, and lenders that is different than the oversight facing certain donative NPOs. For example, these external stakeholders may demand accrual-based financial information to assess NPO financial health prior to lending money, entering a contract, etc., simply as a means of ensuring fulfillment of the business relationship with the NPO (similar to the improvement of contracting efficiency hypothesized by Pinnuck and Potter (2009)). It is predicted, therefore, that NPOs that derive more of their revenues from commercial sources are more likely to report public financial information on the accrual basis than donative nonprofits.

3.5. Organizational characteristics that may influence financial disclosures

The use of accrual-based financial disclosure may be unrelated to external demand for financial reports altogether, and be instead organizational specific. The nonprofit sector is essentially bimodal, with over 70% of NPOs responsible for only 3% of total sector expenses (Rooney, 2007), indicating a significant concentration of financial resources in the sector; nearly 96% of the revenues in the nonprofit sector are reported by organizations measuring resources using the accrual basis, while only 66% of individual organizations report their financial information on the accrual basis.[5] The use of accrual reporting may simply be correlated with organizational size because it is simpler (Gross, 2005).

NPOs may also choose to report financial information on the cash basis simply because they lack knowledge of GAAP. Professional accountants are likely to be aware that GAAP requires accrual reporting, and their primary task is related to financial reporting (versus service provision).

As an organization develops and diversifies its revenue sources (and possibly increases the diversity of its programmatic output), the limitations of cash accounting may force an organization to convert to accrual accounting and reporting. Matching revenues and expenses "becomes harder to do when a busy nonprofit has revenues and expenses for the same events recorded in different years" (Goodman, 2002). NPOs with multiple revenue sources may therefore display a preference for accrual reporting.

Finally, financial reporting decisions may also occur within specific industries. These industry effects may lead NPOs within specific subsectors (based on mission) to make similar choices regarding financial reporting bases. For example, state health departments oversee health organizations within

[5] These figures are derived from the final sample used in the empirical analysis.

the state, nonprofit academic associations accredit educational institutions, federal regulators such as the Federal Deposit Insurance Corporation oversee credit unions, for example.

4. Data

The primary data used in this paper comes from the "The National Center on Charitable Statistics (NCCS)-GuideStar National Nonprofit Research Database" (hereafter called the "digitized data") that covers fiscal years 1998–2003. While the number of fiscal years is significantly lower than the Statistics of Income (which dates back to 1982 and is also based on 990 data), only the digitized data provides detail on the accounting method used in reporting and unrestricted versus restricted net assets. The other available databases do not report the basis of accounting and simply report total net assets.

The digitized data covers all public charities required to file the Form 990. While some concerns have been raised about the data reported in Form 990s (see Lampkin and Boris, 2002 for a cataloguing of many potential limitations), the digitized data is edited and verified by NCCS, increasing the quality of the financial variables included.

The analysis is limited to 501(c)3 public charities, and the digitized database contains 1,388,480 total observations. Table 1 details the data editing process, resulting in 915,881 observations covering 191,232 individual nonprofit organizations.

5. Defining the variables

A summary of all variables is included in Table 2. In this paper ("Accrual") is a dichotomous variable where 1 indicates that an organization reports its public financial information on the accrual basis of accounting and 0 indicates that an organization reports its public financial information on the cash or another basis of accounting (primarily modified cash).[6]

Two variables are included in the analysis to measure donor oversight resulting from restricted donations. The first is "Existence of Temporary Restrictions Only," which is a dummy variable that equals 1 if the organization reports temporarily restricted net assets not equal to $0 and 0 otherwise; the second is "Existence of Temporary and Permanent Restrictions," which is a dummy variable that equals 1 if the organization reports permanently and temporarily restricted net assets not equal to $0 and 0 otherwise. Both variables are included since different types of restrictions may lead to different levels of oversight.[7]

The variable "Ratio Donative Revenue" is defined as "Reported Contributions (line 1a)/Reported Total Revenue (line 12)," and measures the extent to which an organization is donative or commercial. A ratio closer to 0 indicates a more commercial nonprofit organization (since contributions are shrinking as a percent of total revenue), while a ratio closer to 1 indicates a more donative organization (since contributions are increasing as a percent of total revenue).[8]

[6] According to the Form 990 instructions (available at http://nccsdataweb.urban.org/irsforms/i990&ez_99.pdf), NPOs should file the Form 990 with the IRS using the same accounting method used to keep its financial records. However, if state reporting requires a different accounting method, the NPO may file an identical return with the IRS using this different accounting method. The IRS indicates that the NPO "should keep a reconciliation of any differences between its books of account and the Form 990. . .that is filed." A user of the Form 990, however, would not necessarily be aware of such reconciliations. NPOs, however, might file reconciling information on Parts IVA and B ("Reconciliation of Revenue/Expenses per Audited Financial Statements with Revenue/Expenses per Return"). Further, Gordon et al. (2007) find inconsistencies between audited financial statements and Parts IVA and B of the Form 990, reducing the reliability of such reconciling information for users. The digitized database does not contain data on these sections, limiting the analysis to the reported method of accounting. Parts IVA and B were replaced by Schedule D in the Form 990 redesign.

[7] GAAP requires unallocated endowment earnings to be recorded under temporarily restricted net assets under the Uniform Prudent Management of Institutional Funds Act (UPMIFA). Thus, there is a high degree of collinearity between the types of restricted net assets, which is why separate dummy variables for temporarily and permanently restricted net assets are not used. Nearly 75% of the sample reporting permanently restricted net assets also reports temporarily restricted net assets as well.

[8] One concern might be that the basis of accounting used by a NPO might affect reported contributions and total revenues. Data were converted to the cash basis and included to test the sensitivity of all specifications to this possibility. The results were largely unchanged. Fischer et al. (2008) find that adjusting from accrual to cash basis financial information using Form 990 data to be very imprecise. Therefore, these results are not presented here due to the likely measurement error of the variable.

Table 1
Data editing of digitized data sample.

Total available observations from digitized data, 1998–2003	1,388,480
Less: observations excluded because location outside the 50 US states and district of Columbia	(1471)
Less: observations that filed the Form 990EZ (insufficient data on certain variables)	(283,684)
Less: organizations that switched accounting methods more than once, or likely erroneously reported cash basis (for example: reported liabilities and cash basis, reported accrual for all observations except last one)	(69,624)
Less: observations reporting negative total assets	(2199)
Less: organizations with missing data, gaps in time series, or with only one observation in the database	(115,751)
Sample size (Tables 3 and 6)	915,881
Less: observations facing federal or state audit mandates (Table 4)	(327,567)
Observations facing no public audit mandates (Table 5)	588,314

The variable "Attorney General Audit Threshold Met," equals 1 if an organization meets the audit requirements of its state Attorney General, and 0 otherwise, and is similar to a measure used by Keating et al. (2008). Audit requirements and levels were obtained from the "Uniform Registration Statement" project, and merged with the Form 990 financial data.[9]

State Attorney General oversight is based on an index developed by the Ohio Attorney General and used by Gentry (2002) and Fisman and Hubbard (2003, 2005). The specific measures are included in Table 2. The eight individual Attorney General powers enter the statistical models as individual independent variables rather than as a composite index. Since not all states require audits by NPOs, this analysis seeks to determine whether other Attorney General powers might influence the basis of accounting used as well.

Similar to Keating et al. (2008), the variable "Subject to Federal OMB133" equals 1 if the organization is subject to an A-133 audit during the reported fiscal year, and 0 otherwise. These data are from the Census Bureau's Single Audit database and merged with the organizational financial data from the digitized database.

Size has been operationalized as total assets (Tinkelman, 1999, among others). Different bases of accounting might record the same event differently resulting in different total assets, making this definition problematic. In this study, size is defined as the natural log of mean revenues for organization *i*; since cash and accrual revenues will usually converge over time, this definition should minimize potential problems from different bases of accounting.[10] This definition is relaxed in several sensitivity analyses.

The variable "Use of Professional Accountant" is set equal to 1 if the organization reports accounting fees on its Form 990 (line 31), and 0 otherwise. This variable is synonymous with Krishnan et al. (2006) and Keating et al. (2008).

Revenue diversity is defined using a measure of revenue concentration used by Tuckman and Chang (1991).[11] A measure approaching 1 indicates extreme revenue concentration, whereas a measure approaching zero indicates revenue diversity. To aid interpretation, this revenue diversity variable is multiplied by –1 so that a positive coefficient indicates increasing diversity, and vice versa.

[9] http://www.multistatefiling.org.

[10] The 2007 (0.22% of the total sample) observations reporting $0 of average revenues were changed to $1 to avoid losing these observations when logged.

[11] Revenue values less than zero confound this measure, and so, following Hager (2001), annual losses for a particular revenue source are set to $0. Approximately 1.4% of the sample reported negative rent or inventory revenues (indicating related expenses greater than the revenue). Approximately 10% of the observations report losses from securities, implying realized capital losses on investments. These observations were mostly independent from one another; in other words, almost all changes occurred in only a single revenue line, not multiple lines. Setting these instances to $0 is a logical step, from the perspective of revenue concentration. Suppose an organization has $50 in donations and $50 in investment income in year 1, for a revenue concentration index of 0.5. The next year, donations remain at $50 and investment losses are ($50). Not adjusting the concentration index would show that the organization had no change in revenue concentration. In reality, the organization's concentration of revenues increased to 1.0 since it had no investment revenue with which to operate.

Table 2
Variable definitions.

Variable name	Description
Accrual	Dummy variable, coded 1 if organization reports on an accrual basis of accounting, 0 if organization reports on a cash or modified cash basis of accounting
Market oversight variables	
Existence of temporary restrictions only	Dummy variable, coded 1 if organization's reported temporarily restricted net assets not equal to $0, 0 otherwise
Existence of temporary and permanent restrictions	Dummy variable, coded 1 if organization's reported temporarily and permanently restricted net assets not equal to $0, 0 otherwise
Ratio donative revenue	Percentage of total revenue derived from direct individual contributions
Public oversight variables	
Subject to federal OMB133	Dummy variable, coded 1 if organization is subject to a federal A-133 audit, and 0 otherwise
AG audit threshold met	Dummy variable, coded 1 if organization meets the audit requirements of the state in which it operates, and 0 otherwise
Attorney General oversight	State Attorneys General oversight powers related to nonprofit organizations; scale of 0 (lowest) to 8 (highest)
Specific components of Attorney General oversight index	
Enforcing authority	Dummy variable, coded 1 if state Attorney General is named as the enforcing authority, and 0 otherwise
Necessary	Dummy variable, coded 1 if state Attorney General is necessary party to bring action against nonprofit, and 0 otherwise
Registration required	Dummy variable, coded 1 if nonprofits are required to register with the state Attorney General, and 0 otherwise
Enforce trusts	Dummy variable, coded 1 if Attorney General has authority to institute actions to enforce charitable trusts, and 0 otherwise
Periodic report	Dummy variable, coded 1 if nonprofits are required to submit some form of periodic financial reporting to the enforcing authority, and 0 otherwise
Subpoena power	Dummy variable, coded 1 if enforcing authority has power to investigate nonprofit transactions and relationships of trustees, and 0 otherwise
Regulatory rules	Dummy variable, coded 1 if enforcing authority has the power to make the rules necessary for regulation of nonprofits, and 0 otherwise
Probate notification	Dummy variable, coded 1 if probate judges are required to notify enforcing authority whenever a will containing a charitable bequest is admitted to probate court, and 0 otherwise
Organizational variables	
Size	Natural log of mean total revenues for organization i
Use of professional accountant	Dummy variable, coded 1 if organization reported accounting fees greater than $0, and 0 otherwise
Revenue diversity	Sum of $(\text{revenue}_j/\text{total revenues})^2 * -1$; index approaching -1 indicates revenue concentration and index approaching 0 indicates revenue diversification

Nonprofit industry is operationalized using the National Taxonomy of Exempt Entities (NTEE) classification. These codes, included with the Form 990 data, break the data into 26 major categories (such as education, arts and health), and have been used by Fisman and Hubbard (2003) and Denison (2009), among others. The individual NTEE coefficients are not reported in the results due to space, although *F*-Tests are included to test their significance, when appropriate.

The first column in Table 3 displays the descriptive statistics for key variables. The next four columns in Table 3 show the key unweighted variables by quartiles. Table 3 shows that significant numbers of NPOs in most size quartiles do not report on the accrual basis; while the use of the accrual basis clearly increases with size, other factors seem relevant as well in predicting GAAP-compliant reporting. Further, Table 3 indicates that permanently restricted donations and federal contracts requiring OMB A-133 audits are highly concentrated within large NPOs; significant minorities of NPOs are subject to state audit requirements regardless of quartile. Due to size differences between NPOs, the final column of Table 3 reports descriptive statistics for key variables weighted by total assets. This weighted column provides a snapshot of the nonprofit sector for the time period studied.

Table 3
Descriptive statistics: entire sample, by total assets quartiles, and sample weighted by total assets.

Variable	Overall sample	0–25% quartile	26–50% quartile	51–75% quartile	76–100% quartile	Weighted overall sample
Accrual	0.66	0.38	0.59	0.74	0.90	0.96
Existence of temporary restrictions only	0.21	0.10	0.22	0.27	0.25	0.16
Existence of temporary and permanent restrictions	0.11	0.01	0.04	0.10	0.29	0.51
Ratio donative revenue	0.30	0.37	0.33	0.27	0.21	0.16
	(0.36)	(0.40)	(0.37)	(0.33)	(0.31)	(0.26)
Subject to federal OMB133	0.10	0.01	0.04	0.13	0.21	0.37
Attorney General oversight index	4.38	4.40	4.35	4.35	4.41	4.54
AG audit threshold met	0.30	0.16	0.25	0.33	0.47	0.56
Size	5969	600	631	1481	21,200	588,000
	(62,900)	(9069)	(2185)	(4029)	(124,000)	(1,450,000)
Use of professional accountant	0.63	0.55	0.65	0.66	0.65	0.74
Revenue diversity	−0.82	−0.82	−0.84	−0.82	−0.81	−0.80
Observations	915,881	228,971	228,970	228,970	228,970	915,881
Organizations	191,232	81,894	74,721	63,531	49,768	191,232

Means of all variables reported. Standard deviations for *Size* and *Ratio donative revenue* (continuous variables) are in parentheses. Financial variables are from the NCCS-Guidestar Digitized Data for the years 1998–2003. *Subject to federal OMB133* is derived from the US Census Single Audit Act database. *Attorney General oversight index* is from Fisman and Hubbard (2003). The cutoff values for *AG audit threshold met* are derived from the Uniform Registration Project. Size is reported in thousands of dollars. Quartile statistics are not weighted by total assets. Note that the row for organizations does not add across columns since an organization can be represented in more than one quartile if a size change resulted in a change in quartile classification.

6. Empirical analysis and results

6.1. Public mandates

The first analysis focuses on determining the extent to which public mandates influence the use of accrual financial disclosures. In theory, NPOs currently facing audit requirements from state Attorneys General or federal contracts are required to report on the accrual basis. Table 4 describes the dollar value of the total revenues covered by each public mandate. A majority of the total revenues are subject to state audit requirements (56%), while a significant minority is subject to federal audit requirements (37%).

Only 30% and 10% of the sample is subject to state audit requirements and OMB audit requirements, respectively. Of those subject to federal audit requirements, 98% report on the accrual basis while only 2% do not. Of those subject to state audit requirements, 84% report on the accrual basis while 16% do not report on the accrual basis. In both cases, a large majority of the sample seems to report on the accrual basis when required to – although a significant subgroup does not seem to be in compliance with state requirements.[12] OMB audit requirements, it should be remembered, require NPOs to correct any qualified audit opinion findings, whereas states do not have such an enforcement policy. The difference in compliance between these two forms of public oversight of NPO financial reporting may stem from this difference in enforcement of the policies. Overall, mandatory audit requirements – as proposed by the Senate Finance Committee and various state Attorneys General – seem to result in accrual-based financial disclosures by NPOs.

One potentially complicating factor is that some states require NPOs to file audited financial statements if they solicit donations in the state, irrespective of the organizations' physical location. Therefore, a NPO based in a state with no Attorney General audit requirements might be subject to audit requirements if it solicits donors in a state with such a requirement. Line 90a of the Form 990 requires NPOs to list the states with which a copy of the form was filed, allowing further analysis of this issue.

[12] Data are not available on whether those apparently in noncompliance file Schedule IVA and B, as explained in footnote 9.

Table 4
Organizations and revenues subject to public audit requirements.

	Subject to OMB A-133 audit requirements	State AG audit requirement threshold met	Not subject to federal contract or state audit requirements	Total
Observations	89,466	279,006	588,314	915,881
Organizations	22,860	65,106	143,066	191,232
Total reported revenues, 1998–2003	\$2.1 trillion	\$3.2 trillion	\$1.6 trillion	\$5.5 trillion
Percentage of total revenues	37%	56%	29%	100%
Percentage observations reporting using accrual method	98%	84%	54%	66%

Note: Some columns do not add across columns since 40,905 observations are subject to both OMB A-133 and state AG audit requirements. These observations account for approximately \$1.4 trillion of total revenues for 1998–2003. Further, some organizations are represented in more than one column since they became subject to audit requirements during the study's time frame, or became no longer subject to these requirements. *Total reported revenues* is the total amount of revenue for the sample for 1998–2003.

Only 1.6% of the sample reports filing a Form 990 in multiple states; further, only 0.6% of the sample reports filing a Form 990 in a state other than its own with an audit requirement that is more stringent than its own (that is, with an audit threshold lower than its own home state's audit requirement). None of the above analysis is significantly altered when the state audit requirement variable is altered to take into account this multistate reporting. Out-of-state reporting requirements do not appear to influence the decision to issue accrual-based financial disclosures by NPOs.

6.2. NPOs facing no public mandates regarding financial reporting

The second analysis focuses on those NPOs facing neither state nor federal audit requirements. In theory, these NPOs have a choice regarding the accounting method they use in their financial disclosures. In fact, more than 46% of NPOs in the sample facing no public audit requirements do not report on the accrual basis; further, 29% of the sector's total revenues are not subject to audit requirements. In the absence of public mandates, NPOs do exhibit greater variation in the accounting method used for financial reporting.

Cross-sectional data on those NPOs not subject to state or federal audit requirements are pooled to empirically test the associations of market oversight, organizational characteristics, and broad Attorney General oversight on financial reporting. The regression is stated as:

$$\mathrm{Accrual}_{it} = \beta_0 + \beta_1 \mathrm{M}_{it} + \beta_2 \mathrm{AG}_{it} + \beta_3 \mathrm{O}_{it} + \mathrm{Time}_t + \varepsilon_{it} \tag{1}$$

where i represents a NPO, and t is the year (time), M is a vector of market oversight variables (has temporary restrictions only, has temporary and permanent restrictions, and ratio donative revenue) that change over time, AG is a vector of Attorney General powers, and O is a vector of organization characteristic control variables that change over time (revenue diversity, use of professional accountants, and size). Nonprofit subsector fixed effects are included as a variable under O, and do not change over time. AG does not vary over time, as well. "Time" is included as a year fixed effect variable. This model essentially tests the differences between organizations in determining the basis of accounting used. Because of the dichotomous nature of the dependent variable, logistic regression is employed.[13] The coefficients for the time and subsector variables are not reported. Robust standard errors clustered by organization are used to address heteroskedasticity.

[13] Further, although the accounting basis choice may be relatively permanent or long-term, the results using only annual cross-sections are not appreciably different than the results presented here. The pooled cross-section is presented so that the changes in the independent variables can be analyzed.

The results of this specification are displayed in Table 5. The results are presented for the total sample, and then for ‘‘small’’ and ‘‘large’’ NPOs; small NPOs are defined as those observations in the bottom quartile of total assets, while large NPOs are those in the top 5%. Specifically related to Attorney General powers, this analysis considers that large and small NPOs might face different consequences of state powers (as Baber and Gore, 2008 consider in their analysis of the influence of state disclosure regulations on municipal financing decisions). As an example, Attorneys General may enforce charitable reporting requirements to a greater extent on large NPOs due to citizen awareness or concern about these particular charities.

As predicted, the existence of temporary restricted net assets increases the likelihood of accrual reporting. This result is consistent across the size specifications as well, although it is smaller for the large subsample. The results indicate that donor-imposed restrictions do strongly influence the method of accounting used in financial reporting, indicative of increased donor demand for accrual reporting.

Also as predicted, the more commercial the NPO, the more likely it is to report its disclosures on an accrual basis. A 1% decrease in donations as a percentage of total revenues increases the likelihood of accrual reporting by nearly 15%. Combined with the findings on donor-imposed restrictions, these findings may indicate that donors willing to restrict donations for specific purposes and average donors value the basis of accounting choice differentially. However, these results are not consistent across size. Large NPOs with donations increasing as a percentage of total revenues also report increased probabilities of accrual reporting. Donations as a percentage of total revenues are low within this large NPO subsample; this result might indicate donors giving very large donations (to a hospital or university, for example) or whose gifts are large shares of total revenues might demand accrual-based reporting.

Size also shows the predicted results, and the results are consistent across the subsamples (although much smaller in the large subsample). The revenue diversity shows the predicted results on accrual reporting, but the results are not consistent across the small and large subsamples. Revenue diversity is negative for small NPOs, indicating that increasing revenue concentration is more predictive of accrual reporting. Perhaps revenue concentration leads smaller NPOs to adopt accrual reporting because a single important revenue provider (donor, government, or other) demands it. Finally, the nonprofit industry subsector variables are also significant, indicating common reporting across NPOs with similar missions.[14]

Despite contentions that Attorneys General monitor NPOs similarly to shareholders and private corporations, the Attorney General oversight variables are not consistently positive or significant.[15] Most basically, requiring registration makes the Attorney General aware of the organizations facing oversight by the state, while requiring periodic financial reporting (although not necessarily audits) provides the Attorney General with information that may aid in regulating NPOs. These requirements might also make NPOs aware of their oversight from the Attorney General; under this explanation, NPOs comply with GAAP in their financial reporting because they are aware that public oversight of their organization exists.

The ‘‘Enforcing Authority’’ variable (meaning, the state explicitly grants the Attorney General enforcement powers of charitable law within the state) may decrease accrual reporting because this statute prevents other government agencies or officials from exerting legal influence on nonprofits within the state. ‘‘Regulatory Rules’’ (meaning the Attorney General is granted rule-making authority in its enforcement duties) may be negative because it is dependent on ‘‘Enforcing Authority;’’ in other words, an Attorney General cannot have rule-making authority without enforcement power.

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[14] The Housing subsector had the most accrual reporters in the sample (86%), while Public Safety (24%) had the fewest accrual reporters. Focusing on total revenues rather than organizations, Health reports nearly 98% of their total revenues on the accrual basis (probably to accrue for bad debt/charity care, cost accounting purposes, and third party reimbursement issues), while only 60% of the Public Safety revenue is reported on the accrual basis (perhaps because of reliance on government funds which are also not measured on the accrual basis). Excluding the top 10% of NPOs by size, 96% of the Health revenues are still reported on the accrual basis, while only 28% of Public Safety revenues are.

[15] In fact, including just the combined index rather than the individual powers results in a statistically significant but negative coefficient (and small marginal effect), indicating that overall Attorney General oversight has little overall influence on the accounting method used in reporting.

Table 5
Associations between basis of accounting used in financial disclosures and donor oversight variables, state Attorney General powers, and individual organization characteristics.

	Total sample	Marginal effects (%)	Small observations	Marginal effects (%)	Large observations	Marginal effects (%)
Has temporary restrictions only	1.26*** (0.02)	26.92	1.07*** (0.03)	25.09	1.83*** (0.18)	3.45
Has temporary and permanent restrictions	1.36*** (0.03)	27.39	1.09*** (0.11)	26.04	1.87*** (0.15)	4.41
Ratio donative revenue	−0.60*** (0.02)	−14.66	−0.42*** (0.03)	−8.83	0.47*** (0.18)	1.33
Revenue diversity	0.19*** (0.02)	5.68	−0.18*** (0.03)	−3.79	1.05*** (0.16)	2.95
Use of professional accountants	0.24*** (0.01)	5.86	0.30*** (0.02)	6.18	0.03 (0.09)	0.00
Size	0.61*** (0.01)	14.92	0.51*** (0.01)	10.58	0.26*** (0.03)	0.73
AG oversight: enforcing authority	−0.13*** (0.02)	−3.07	−0.12*** (0.04)	−2.57	−0.12 (0.17)	−0.32
AG oversight: necessary	−0.03 (0.02)	−0.65	−0.03 (0.03)	−0.66	0.16 (0.15)	0.45
AG oversight: enforce trusts	0.17*** (0.02)	4.04	0.23*** (0.04)	4.77	−0.13 (0.18)	−0.35
AG oversight: registration required	0.08** (0.03)	1.98	−0.03 (0.06)	−0.55	0.28 (0.23)	0.75
AG oversight: periodic report	0.17*** (0.02)	4.09	0.17*** (0.03)	3.44	0.26* (0.14)	0.76
AG oversight: subpoena power	0.08* (0.02)	1.97	0.09** (0.04)	1.89	−0.02 (0.16)	−0.00
AG oversight: regulatory rules	−0.18*** (0.04)	−4.35	−0.01 (0.06)	−0.17	−0.68** (0.27)	−2.30
AG oversight: probate notification	−0.21*** (0.02)	−5.25	−0.35*** (0.03)	−7.10	−0.01 (0.16)	−0.00
Constant	−5.97*** (0.12)		−6.03*** (0.19)		0.56 (0.58)	
Wald Chi^2	27,052.68***		5468.85***		823.20***	
Pseudo R^2	24.22%		11.25%		31.68%	
Year dummies F-test	198.66***		40.25***		32.70***	
NTEE dummies F-test	5698.14***		1397.82***		408.05***	
Observations	588,314		147,079		29,416	
Organizations	143,066		58,885		7480	

The marginal effect indicates the effect of a change from 0 to 1 for dummy variables, and the effect of a one-unit change for continuous variables. Observations are defined as "Small" if total assets are in the bottom 25% of the subsample not subject to public audit requirements, and "Large" if in the top 5%. Clustered robust standard errors are in parentheses.
* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

Additionally, rule-making authority is actually limited in most cases to whether NPOs must register with the state.

Empowering Attorneys General with subpoena power to investigate NPOs is only marginally significant. Subpoena power is likely only relevant for criminal investigations concerning NPO finances, yet such allegations of wrongdoing are rare in the nonprofit sector (Fremont-Smith and Kosaras, 2003).

Overall, the powers that increase the use of accrual reporting are similar to those described by Desai and Yetman (2006) as "Detection" powers, while those that decrease the use of accrual reporting are similar to those described as "Prosecution" powers. Desai and Yetman (2006) find that detection powers influence financial reporting more than prosecution powers, suggesting that NPOs seek to avoid the appearance of impropriety as a means of ensuring continued donor support. Similarly, the results presented here suggest that NPOs seek to increase the use of the accrual basis in their financial reporting in response to the detection powers of Attorneys General, perhaps a means of avoiding legal actions entirely.

The results for the entire sample are largely consistent in the small NPO subsample (although, interestingly not for required registration), but are generally not significant for the large subsample. For small NPOs with no public audit requirements, the existence of certain Attorney General powers does appear to influence the issuance of accrual-based financial disclosures. The results suggest that small NPOs are more sensitive to detection powers than large NPOs, perhaps because one accusation of impropriety may be more fatal to a small organization compared to a large one.

The overall results of the regression suggest that increased external monitoring by market actors increases the likelihood that NPOs with a choice in accounting methods will report their financial information on an accrual basis of accounting. While ample evidence finds that NPO accounting information influences donor contributions (Tinkelman and Mankaney, 2007), the results presented here suggest that certain donors can influence the disclosures of these NPOs. Since the bulk of the nonprofit sector is populated by small organizations – who may or may not increase in size – and is not subject to public audit requirements, this finding indicates the important role of donors in the use of accrual-based financial reporting by NPOs.

This analysis also reveals important insights into nonprofit regulation at the state level. These findings suggest that eliminating or altering certain existing Attorney General powers (as suggested by Irvin (2005)) – including eliminating the monopoly power some Attorneys General enjoy relative to NPO oversight – can actually increase the probability of accrual reporting. Additionally, policies that support the detection of potential problems in NPOs are of greater influence with respect to financial disclosures than powers to prosecute wrongdoing. Even barring explicit audit requirements, the analysis shows these detection powers can increase the use of accrual disclosures.

6.3. Factors that influence a change in accounting method

The final set of empirical analyses examines what factors are important in a NPO's decision to change accounting methods to the accrual basis. This analysis is especially relevant to inform any potential public policy changes targeting financial reporting from NPOs. Specifically, this analysis can highlight whether public policies can influence the decision of NPOs to switch to the accrual basis in financial disclosures.

Table 6 divides the sample into three subsamples: those that reported on the accrual basis in all years, those that reported on the cash basis in all years, and those that changed from the cash to the accrual basis. A univariate test comparing the means of the "Cash Method, All Years" and "Changed from Cash to Accrual" subsamples is presented in the last column.[16] The results indicate that NPOs that changed from cash to accrual are different than those that maintained cash reporting.

Table 7 displays the number of NPOs that were subject to public mandates and had donor restricted contributions prior to the switch to accrual, the year of the switch, and the year following the switch. Nearly 30% of the NPOs that switched to accrual reporting were actually subject to federal or state audit requirements prior to their switch. In many cases, publicly mandated audit requirements may influence a change to accrual reporting, but it is not clear that the change occurs immediately. Over 55% of the NPOs that switched from cash to accrual were subject to either mandated public audits or reported restricted donations.

[16] The reported *Z* scores are from the Wilcoxon–Mann–Whitney test, which is similar to a *t*-test. The Wilcoxon–Mann–Whitney test is preferred here simply because most of the variables are dichotomous and not, by definition, normally distributed. However, the results are the same when using a standard *t*-test.

Table 6
Variable means, total sample grouped by accounting method used in financial disclosure.

Variable	Accrual method, all years	Cash method, all years	Changed from cash to accrual	Comparison of changed sample to cash method all years sample (*Z* score)
Existence of temporary restrictions only	0.28	0.07	0.25	−111.86***
Existence of temporary and permanent restrictions	0.15	0.03	0.10	−72.83***
Ratio donative revenue	0.26 (0.47)	0.36 (0.39)	0.38 (0.37)	−22.64***
Subject to federal OMB133	0.15	0.01	0.05	−84.30***
AG audit threshold met	0.39	0.14	0.28	−75.23***
Attorney General oversight index	4.39	4.36	4.36	0.06
Size	9113 (79,100)	493 (4638)	1973 (10,100)	−5.51***
Use of professional accountant	0.66	0.55	0.65	−39.65***
Revenue diversity	−0.82	−0.82	−0.85	−3.30***
Observations	574,511	298,835	42,535	
Organizations	112,302	71,069	7861	

Table 6 reports the variable means for all 915,881 observations representing 191,232 organizations of the entire sample classified by the basis of accounting used. The numbers is parentheses are the standard deviations for the continuous variables. The comparative *Z* score tests whether the means of the cash method all years and the changed from cash to accrual groups have a significant difference in the explanatory variables.
*** Significant at 1%.

Table 7
Number of organizations subject to public mandates and reporting restricted donations that switched reporting from cash to accrual.

Category	Year before switch to accrual	Year of switch to accrual	Year after switch to accrual
Number of NPOs subject to federal OMB133	289 (3.7%)	395 (5.0%)	449 (5.7%)
Number of NPOs at AG audit threshold	2059 (26.2%)	2303 (29.3%)	2328 (29.6%)
Number of NPOs reporting temporary restrictions only	1422 (18.1%)	2187 (27.8%)	2230 (28.4%)
Number of NPOs reporting temporary and permanent restrictions	578 (7.4%)	724 (9.2%)	806 (10.3%)
Not subject to public mandates or donor restrictions	4343 (55.2%)	3493 (44.4%)	3381 (43.0%)

Table 7 describes the NPOs that switched from cash to accrual reporting that were subject to public audit requirements, as well as those NPOs reporting restricted donations. The percentages in parenthesis reference the 7861 NPOs that switched to accrual reporting; columns do not sum to 7861 organizations since one NPO can be in multiple categories.

To confirm the results reported in Table 6, a multivariate analysis using the "Cash Method, All Years" and "Changed from Cash to Accrual" subsamples were combined, and a logistic regression similar to equation 1 was specified. The results are presented in Table 8. Column one includes state and federal audit requirement variables, while the third column excludes those NPOs facing public audit mandates. The results support the findings that public audit requirements and donor restrictions have significant and positive effects on the use of accrual reporting by nonprofits, confirming the roles of market and public oversight in the decision to issue accrual-based financial disclosures. Removing

Table 8
Associations between basis of accounting used in financial disclosures and public mandates and market oversight: "Cash Method All Years" and "Changed from Cash to Accrual" subsamples only.

	Whole subsample		Subsample not subject to public audit requirements	
	Coefficient	Marginal effects (%)	Coefficient	Marginal effects (%)
Has temporary restrictions only	1.28*** (0.03)	6.18	1.33*** (0.03)	5.33
Has temporary and permanent restrictions	1.23*** (0.05)	6.18	1.28*** (0.06)	5.29
Subject to federal OMB133	0.63*** (0.08)	2.43		
AG audit threshold met	0.32*** (0.03)	1.01		
Ratio donative revenue	−0.25*** (0.03)	−0.73	−0.25*** (0.04)	−0.56
Revenue diversity	0.04 (0.04)	−0.10	−0.05 (0.05)	−0.10
Use of professional accountants	0.29*** (0.02)	0.80	0.30*** (0.03)	0.66
Size	0.58*** (0.01)	1.64	0.64*** (0.01)	1.43
AG oversight: enforcing authority	−0.14*** (0.05)	−0.42	−0.14** (0.06)	−0.34
AG oversight: necessary	0.12*** (0.04)	0.35	0.16*** (0.05)	0.37
AG oversight: enforce trusts	0.03 (0.05)	0.08	0.01 (0.06)	0.03
AG oversight: registration required	0.34*** (0.07)	0.99	0.36*** (0.07)	0.81
AG oversight: periodic report	0.15*** (0.04)	0.41	0.12*** (0.05)	0.26%
AG oversight: subpoena power	0.08 (0.05)	0.23	0.11*** (0.05)	0.24
AG oversight: regulatory rules	−0.51*** (0.08)	−1.42	−0.50*** (0.09)	−1.09
AG oversight: probate notification	0.02 (0.04)	0.06	−0.02 (0.04)	−0.00
Constant	−13.66*** (0.23)		−14.56*** (0.29)	
Wald Chi^2	11,734.40***		7895.01***	
Pseudo R^2	22.81%		20.67%	
Year dummies *F*-test	5024.28***		3218.51***	
NTEE dummies *F*-test	843.87***		610.01***	
Observations	341,370		285,506	
Organizations	78,930		71,351	

The whole subsample column includes those NPOs that reported using only the cash basis plus those NPOs that switched from cash to accrual, as described in Table 6. The subsample facing no public audit requirements excludes those NPOs subject to both OMB133 and state Attorney General audit requirements. Clustered robust standard errors are in parentheses.
** Significant at 5%.
*** Significant at 1%.

those NPOs with public mandates confirms the importance of donors willing to restrict donations to the use of accrual reporting, and the influence certain donors can have on nonprofit financial disclosures. The results also support the findings that Attorney General detection powers do tend to positively influence the use of accrual reporting by NPOs, although the effect is muted compared to the results of Table 5.

6.4. Robustness tests

Robustness tests were undertaken to analyze particular variables included in the estimations. "Size" was re-defined restrictively as cash and short-term investments. This definition would not capture if nonprofits moved cash into long-term investments, however. "Size" was also defined as the sum of cash, short-term investments, and long-term investments. Finally, "Size" was defined in the traditional manner "Total Assets," ignoring the potential bias from accounting basis. All specifications had the expected positive sign. All other variables in the specifications were unchanged, indicating that the model is robust to alternative "Size" specifications.

The commercial or donative nature of a NPO was measured using contributions from individuals only. Defining contributions to include both government grants (line 1c) and special events revenue (line 9c) was also included. In all estimations, the other independent variables were unchanged and the coefficient on the "Ratio Donative Revenue" variable maintained its sign and significance.

The analysis in Table 8 analyzing those NPOs that changed accounting methods with those that maintained cash reporting was re-estimated to test for robustness. The organizations that changed were matched to similar NPOs that did not change in the year of the change only (rather than allowing all years of the data to enter the estimation).[17] The results were largely unchanged from those presented in Table 8, whether or not the public mandate variables were included.

One potential concern might be that the preceding analyses could not control for specific unobserved factors that might influence the basis of accounting used in financial disclosures by NPOs. For example, the financial sophistication of the board and managers, or the organizational culture, among others, might be relevant in predicting the basis of accounting used. Analyzing the 7861 NPOs that changed from cash to accrual allows for a fixed effects specification in which these potential unobserved variables may be controlled.[18] The results were consistent with the results in Tables 5 and 8, again whether or not the public mandate variables were included.

7. Conclusion

Despite the sometimes-weak oversight of financial disclosures by public authorities, most NPOs report their information on the accrual basis, and nearly 96% of the sector's revenues are reported on an accrual basis. This study uses a large sample of NPO financial disclosure information to analyze factors that might influence the use of accrual reporting, a subject unexplored in the existing literature. The analysis finds that the majority of NPOs currently subject to mandatory audits due to federal contracting requirements or from state Attorneys General do report their financial disclosures on the accrual basis. Less than 30% of NPOs, however, are subject to such requirements, and approximately 46% of NPOs not subject to mandates do not report on the accrual basis.

For NPOs lacking public mandates, donors that restrict gifts increase the use of accrual reporting, indicating a higher demand for such reporting from certain market actors. While the existing literature has shown the effect accounting information has on donors, these results suggest that certain donors can actually influence the disclosures of NPOs. Further, this paper finds that Attorney General detection powers (rather than prosecution powers) are more relevant for predicting the use of accrual reporting by NPOs, indicating that public policies not directly focused on financial audit requirements

[17] Organizations that switched accounting methods were matched with NPOs that did not switch. These matches were randomly drawn from the subsample with weight given to the donor and public mandate variables to increase the comparability of the switching and non-switching NPOs.

[18] The Attorney General powers, industry subsectors, and size variables are time invariant, so they could not be included in this specification. Size was re-defined using cash, cash and investments, and total assets as described in the robustness checks.

for NPOs still influence accrual reporting. These public mandates and donor demands are also found to influence NPOs that switch from the cash to the accrual basis as well. Just as Pinnuck and Potter (2009) find that market demand influences accrual-based financial disclosures in certain local governments, these results also suggest that such market demand for accrual-based financials holds in the nonprofit sector as well. The evidence here regarding the roles of public mandates and market demand is robust to different specifications and variable definitions as well.

While advocates believe such requirements increase NPO accountability to the public, GAAP-compliant disclosures primarily cover elements of probity and do not necessarily provide relevant information on service quality or outcome measures to assess organizational performance. Gordon et al. (2009) have called for education efforts so that financial statement users will look beyond ratio analysis to ascertain whether NPOs are meeting their mission to address this policy concern. In fact, intensive focus on ratios has, in certain situations, reduced the accountability of NPOs to the public by encouraging these charities to make questionable accounting and business choices to comply with standards (Tinkelman, 2009). Therefore, such education efforts seem relevant in the debate to increase audit requirements without additional performance measures as well.

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References

Baber, W.B., Gore, A.K., 2008. Consequences of GAAP disclosure regulation: evidence from municipal debt issues. The Accounting Review 83 (3), 565–591.
Dechow, P.M., 1994. Accounting earnings and cash flows as measures of firm performance: the role of accounting accruals. Journal of Accounting and Economics 18, 3–42.
Denison, D.V., 2009. Which nonprofit organizations borrow? Public Budgeting and Finance 29 (3), 110–123.
Desai, M.A., Yetman, R.J., 2006. Constraining Managers without Owners: Governance of the Not-for-profit Enterprise. SSRN. <http://www.ssrn.com/abstract=661301> or doi:10.2139/ssrn.661301.
Fischer, M., Gordon, T.P., Khumawala, S., 2008. Tax-exempt organizations and nonarticulation: estimates are no substitutes for disclosure of cash provided by operations. Accounting Horizons 22 (2), 133–158.
Fisman, R., Hubbard, R.G., 2003. The role of nonprofit endowments. In: Glaeser, E. (Ed.), The Governance of Not-for-profit Organizations. University of Chicago, Chicago, IL, pp. 217–232.
Fisman, R., Hubbard, R.G., 2005. Precautionary savings and the governance of nonprofit organizations. Journal of Public Economics 89, 2231–2243.
Fremont-Smith, M.R., 2004. Governing Nonprofit Organizations: Federal and State Law and Regulations. Belknap Press of Harvard University, Cambridge, MA.
Fremont-Smith, M.R., 2007. The search for greater accountability of nonprofit organizations: recent legal developments and proposals for change. Fordham Law Review 76, 609–646.
Fremont-Smith, M.R., Kosaras, A., 2003. Wrongdoing by officers and directors of charities: a survey of press reports 1995–2002. The Exempt Organization Tax Review 42, 25–51.
Gentry, W.M., 2002. Debt, investment and endowment accumulation: the case of not-for-profit hospitals. Journal of Health Economics 21, 845–872.
Goodman, B., 2002. Cash or Accrual? Selecting the Correct Method, The Nonprofit Times.
Gordon, T., Khumawala, S., 1999. The demand for nonprofit financial statements: a model of individual giving. Journal of Accounting Research 18, 31–56.
Gordon, T., Khumawala, S.B., Kraut, M.A., Meade, J.A., 2007. The quality and reliability of form 990 data: are users being misled? Academy of Accounting and Financial Studies Journal 11, 27–49 (Special issue).
Gordon, T.P., Knock, C.L., Neely, D.G., 2009. The role of rating agencies in the market for charitable contributions: an empirical test. Journal of Accounting and Public Policy 28, 469–484.
Greenlee, J., Keating, E., 2004. Accounting for membership revenues and fundraising costs. Nonprofit Management and Leadership 15 (2), 251–257.
Gross, M.J., 2005. Financial and Accounting Guide for Not-for-Profit Organizations, seventh ed. Wiley, Hoboken, NJ.
Hager, M.A., 2001. Financial vulnerability among arts organizations: a test of the Tuckman–Chang measures. Nonprofit and Voluntary Sector Quarterly 30 (2), 376–392.

Hager, M.A., Pollak, T., Wing, K., Rooney, P.M., 2004. Getting What We Pay For: Low Overhead Limits Nonprofit Effectiveness. Nonprofit Overhead Cost Project: Fact and Perspectives, Center on Nonprofits and Philanthropy, Urban Institute, and Center on Philanthropy, Indiana University, Brief No. 3.
Irvin, R.A., 2005. State regulation of nonprofit organizations: accountability regardless of outcome. Nonprofit and Voluntary Sector Quarterly 34 (2), 161–178.
Keating, E.K., Frumkin, P., 2003. Reengineering nonprofit financial accountability: toward a more reliable foundation for regulation. Public Administration Review 63 (1), 3–15.
Keating, E.K., Fischer, M., Gordon, T.P., Greenlee, J., 2005. The single audit act: how compliant are nonprofit organizations? The Journal of Budgeting, Accounting and Financial Management 17 (3), 285–309.
Keating, E., Parsons, L.M., Roberts, A.A., 2008. Misreporting fundraising: how do nonprofit organizations account for telemarketing campaigns? The Accounting Review 83 (2), 417–446.
Krishnan, R., Yetman, M.H., Yetman, R.J., 2006. Expense misreporting in nonprofit organizations. The Accounting Review 81 (2), 399–420.
Lampkin, L.M., Boris, E.T., 2002. Nonprofit organization data. American Behavioral Scientist 45 (11), 1675–1715.
Manny, J.S., 2007. Nonprofit payments to insiders and outsiders: is the sky the limit? Fordham Law Review 76, 735–763.
Pinnuck, M., Potter, B.N., 2009. The quality and conservatism of the accounting earnings of local governments. Journal of Accounting and Public Policy 28, 525–540.
Rooney, P., 2007. Individual giving. In: Young, D.R. (Ed.), Financing Nonprofits: Putting Theory into Practice. Rowman–Altamira Publishing, Lenham, MD, pp. 23–45.
Tinkelman, D., 1999. Factors affecting the relation between donations to not-for-profit organizations and an efficiency ratio. Research in Government and Nonprofit Accounting 10, 135–161.
Tinkelman, D., 2009. Unintended consequences of expense ratio guidelines: the avon breast cancer walks. Journal of Accounting and Public Policy 28, 485–494.
Tinkelman, D., Mankaney, K., 2007. When is administrative efficiency associated with charitable donations? Nonprofit and Voluntary Sector Quarterly 36 (1), 41–64.
Tuckman, H.P., Chang, C.F., 1991. The financial vulnerability of nonprofit organizations. Nonprofit and Voluntary Sector Quarterly 20 (4), 445–460.
Zimmerman, J.L., 1977. The municipal accounting maze: an analysis of political incentives. Journal of Accounting Research 15, 107–144.