



Full length article

## Nonprofit accounting conservatism

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## ABSTRACT

In this study we examine whether U.S. nonprofit organizations engage in conservative financial reporting, and whether conservatism has an impact on future donations. Employing the model developed by Ball and Shivakumar (2005) for non-public companies, coupled with a sample of over 72,000 industry diverse nonprofit-years, we find evidence consistent with nonprofit firms, on average, reporting conservatively. Further, when we consider stakeholder demand for financial reports, we find that organizations that receive sizable government funding report more aggressively, consistent with a reduced demand for financial statement information. We also consider whether nonprofit managers have incentives to report conservatively, and document that organizations providing bonuses or perquisites to their executives report more aggressively. Finally, we study whether donors value conservative reporting and find that organizations that report conservatively are associated with higher future contributions. We believe these findings will be of great interest to managers, regulators, and those that engage in academic research in this important sector of our economy.

## 1. Introduction

A healthy body of nonprofit literature has confirmed the use of earnings information by donors and other nonprofit stakeholders (Parsons, 2003; Parsons, 2007; Trussel and Parsons, 2007; Parsons and Trussel, 2008). Improved access to financial information via intermediaries such as Guidestar and ProPublica has also enhanced the information environment of nonprofits, supporting assessments of financial reporting quality and systematic comparisons across organizations.<sup>1</sup> This reliance on nonprofit financial reporting has encouraged stakeholders, regulators and the academic community to improve our understanding of the characteristics and quality of nonprofit financial information.

A natural extension to the reliance on, and availability of, nonprofit financial information is a consideration of the characteristics of financial reports, as well as the impact of those characteristics on nonprofit public support, namely donations. While a significant

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<sup>1</sup> Guidestar by Candid is the leading depository of nonprofit information in the U.S. (<https://www.guidestar.org>) providing users with IRS informational tax Form 990 information as well as self-reported financial, program, and governance information; ProPublica makes IRS Form 990s available electronically for over 3 million nonprofit organizations since 2001 (<https://www.propublica.org>).

amount of research has been generated concerning the characteristics of financial reports in the for-profit sector, the attributes of financial reporting in the nonprofit sector are woefully understudied. This is surprising given that nonprofit organizations are required to provide financial information via IRS Form 990 in return for their tax-exempt status.<sup>2</sup> That is, similar to for-profit public firms required to make their financial statements available to the public in the Electronic Data Gathering, Analysis, and Retrieval system (EDGAR, <https://www.sec.gov/edgar.shtml>), nonprofit organizations are required to file IRS Form 990, which following the Freedom of Information Act, must be made available to the public.

Despite these filing similarities, nonprofits do not have the same profit-generation focus as for-profit firms. For this reason, nonprofit financial statement users may not value the same financial reporting attributes as for-profit users. We seek to understand the characteristics of financial reporting as well as stakeholders' reactions to these reporting practices in the nonprofit setting.

To do so, we focus our study on conservative financial reporting. Conservatism is an important and prevalent feature of financial reporting that has been studied extensively in the for-profit sector both in public (Basu, 1997; Ball et al., 2000; Givoly and Hayn, 2000; Ahmed et al., 2002; Watts, 2003; Beaver and Ryan, 2005) and private (Ball and Shivakumar, 2005; Hope et al., 2013) company settings. We draw from this literature to motivate our work given that the nonprofit setting shares characteristics with both public and private for-profit companies. Similar to public for-profit firms, nonprofit organizations rely on public support and often have very diverse and disbursed constituencies, akin to publicly traded firms with a large shareholder base. Similar to private for-profit firms, nonprofits have reduced regulatory demands on their financial reporting and do not generate reports that contribute to changes in stock price. While these similarities allow us to use prior research related to conservatism as a springboard for our study, differences between the for-profit and nonprofit sectors exist which encourage an explicit understanding of how conservatism will play out in this unique sector of our economy. The most significant of these differences is that nonprofit stakeholders are not owners, and therefore the information needs of owners are not the primary driver of conservative financial reporting in this setting. As a result, this study aids in our understanding of conservatism in a hybrid public/private firm setting where the public relies on financial reporting, but stakeholders are not owners.

We concentrate on conservatism in the nonprofit sector for several reasons.<sup>3</sup> To start, the asymmetric treatment of gains and losses is a particularly relevant attribute of nonprofit earnings, as the timing of donor/program revenues and expenses can have an impact on future donations, government grants, and assessments of managers' abilities (Basu et al., 2022). That is, dovetailing nonprofit literature which confirms donors' and grantors' use of financial information in their decision to support a nonprofit (Parsons and Trussell, 2008), with for-profit literature which finds that conservative reporting renders financial statements more useful in decision-making (Watts, 2003a), we conjecture that conservative reporting will provide supporters with more meaningful information with which to make their contribution decisions.

Conservatism is also associated with the role of stewardship in financial reporting.<sup>4</sup> While the most recent draft of the FASB conceptual framework does not explicitly use the term stewardship, the objective of financial reporting incorporates stakeholders' use of financial statements to make resource allocation decisions as well as judgments as to whether management has made efficient and effective use of resources provided (FASB CON 8). These attributes are especially important in the nonprofit setting where stewardship is a focal role of charity management (Van Puyvelde et al., 2012; Davis et al., 1997; Altamuro et al., 2020).

Additionally, conservatism has also been found to reduce contracting costs, as managers that are less aggressive in their revenue recognition or less likely to under report expenses are easier to monitor (Ball and Shivakumar, 2005). Finally, Watts (2003) contends that conservatism can improve the efficiency of the financial reporting system in the absence of formal contracting. Given that most donor contributions are not associated with formal contracts, we conjecture that conservatism serves to reduce the information asymmetry between donors and nonprofits.

While there are several compelling arguments for the existence of conservative financial reporting for nonprofit firms, there are also reasons why nonprofit earnings would not exhibit accounting conservatism. Although access to nonprofit financial statements has increased for donors and program participants in recent years, financial data may not be of "first-order" importance for nonprofit stakeholders.<sup>5</sup> Additionally, one of the sources of conservative accounting that has been well documented in the for-profit literature is litigation risk (Watts, 2003a). By understating the net assets of the firm, conservatism reduces the potential payoffs in the result of a lawsuit. Given that beneficiaries of nonprofits are not shareholders to whom the firm has a fiduciary responsibility, the benefits of

<sup>2</sup> Specifically, in exchange for the tax benefits received by the organization (i.e., income, property, and sales tax exemptions), as well as tax deductions provided to donors, most charitable organizations are required to file IRS informational Form 990 and make their last three filings available to the public pursuant to the Freedom of Information Act. IRS Form 990 is required of non-religious nonprofit organizations reporting revenues of at least \$200,000 or assets of at least \$500,000. Smaller organizations with revenues of less than \$200,000 and assets of less than \$500,000 may file a shorter 990-EZ form.

<sup>3</sup> According to Beaver and Ryan (2005) "We define accounting conservatism as the on average understatement of the book value of net assets relative to their market value (hereafter, the existence of expected unrecorded goodwill). Examples of unconditional conservatism include immediate expensing of the costs of most internally developed intangibles, depreciation of property, plant, and equipment that is more accelerated than economic depreciation (hereafter accelerated depreciation), and historical cost accounting for positive net present value projects". We rely on this definition of unconditional conservatism in our manuscript, and simply refer to conservatism from this point forward.

<sup>4</sup> The stewardship concept implies that the purpose of accounting is to check the honesty and reliability of agents (Balakrishnan, Watts and Zuo (2016) refer to Watts (1977) when defining the concept of stewardship). The most recent conceptual frameworks (FASB 2010, IASB 2018) also note that stewardship and valuation are equivalent from an informational demand perspective (FASB 2010).

<sup>5</sup> For example, the majority of hospital revenues are generated by patient procedures, and future donations may be associated with prior experiences rather than with an assessment of financial reporting (Gordon and Khumawala 1999).

conservative reporting are less likely to be recognized in this substantially less litigious setting.<sup>6</sup> Another explanation for conservatism in the for-profit literature is related to debt contracting (Ahmed et al., 2002). Timely loss recognition increases financial statement usefulness in evaluating debt pricing and setting agreement terms (Ball and Shivakumar, 2005). However, Gaver et al. (2016) find that approximately 2% of nonprofit organizations in their sample have enough debt to be rated by a debt rating agency, and we find that only 1.6% of our sample organizations report revenues from bond sales in the current year and only 13% carry any amount of outstanding bond liabilities. Therefore, we similarly do not expect debt contracting to play a significant role in nonprofit managers' incentives to report conservatively. Given these distinct differences between for-profit and nonprofit managers and their motivations, we believe understanding the role of conservatism in nonprofit financial reporting is an especially important empirical question.

Finally, our study extends nonprofit research which examines financial reporting quality in the nonprofit sector (Krishnan et al., 2006; Yetman and Yetman, 2012; 2013). While these prior studies have focused on unexpected functional classification of expenses, specifically reporting zero fundraising expenses during times of nonzero donations collections, our study employs conservatism as an alternative measure of reporting quality. That is, we add to our collective understanding of nonprofit financial statement quality by considering conservatism as a distinct mechanism for evaluating the quality of financial reporting, an approach which has been well-studied in the for-profit sector and ripe for examination in the nonprofit setting.

To study conservatism and the asymmetric timeliness of earnings in the nonprofit sector we use the accruals-based model developed by Ball and Shivakumar (2005). This model is best suited to our setting because previous models rely on market-based measures to identify earnings timeliness, measures unavailable in the nonprofit sector.<sup>7</sup> Using the Ball and Shivakumar (2005) model, we test the asymmetric response of accruals in periods of positive and negative cash flows, allowing us to analyze whether nonprofit managers are conservative in their reporting. Specifically, if accruals are smaller during periods of negative operating cash flows, then organizations are said to be reporting conservatively.

Employing this model and a sample of over 72,000 industry-diverse, nonprofit, firm-year observations over a seven-year time period, we find evidence consistent with nonprofit accounting conservatism. We find that when the nonprofit organizations in our sample report negative cash flows, they simultaneously report lower accruals consistent with more conservative reporting. We believe these findings support the stewardship motivation documented in earlier for-profit research (Watts, 2003a), indicating that nonprofits can signal, via conservatism, that assets are being managed appropriately.

In addition to understanding the role of conservatism in the nonprofit sector as a whole, we are also interested in the cross-sectional variations in the use of accounting conservatism across the sector. Ball and Shivakumar (2005) establish that in the private company setting there is a diminished demand for financial statement information due to private or "as-needed" communications with financial statement users, leading to reduced accounting conservatism. To test this variation in our setting, we examine organizations that receive sizeable government grants and are therefore required to submit detailed financial information via grant applications and reporting. We find that in this setting, where the demand for financial statement information is lower, nonprofits are less likely to engage in accounting conservatism. That is, when the demand for external financial statements is weaker, financial reporting has a reduced role in signaling to stakeholders that management is providing adequate stewardship over the assets of the organization.

We also consider whether incentives to report more aggressively have an impact on financial reporting conservatism among nonprofits, similar to research in the for-profit setting. Specifically, we examine whether offering bonuses and perquisites to nonprofit executives has an impact on conservative reporting. Here we find that organizations that provide these benefits to their managers are less likely to report conservatively, consistent with increased incentives to be more aggressive in their reporting.

Our last set of analyses consider the role that accounting conservatism plays in donors' decision to give. If conservative financial reporting boosts donor confidence that their dollars are being effectively managed, then we would expect higher future donations in the presence of conservatism. However, if donors are unconcerned or unaware of accounting conservatism, we would not expect conservatism to affect donor decisions. To test this conjecture, we augment the traditional donations demand model (Weisbrod and Dominguez, 1986) to include an established measure of accounting conservatism (Givoly and Hayn, 2000). Our results indicate that, indeed, accounting conservatism is important to donors in the market for donations. We believe this finding is of particular importance for nonprofits in our current economic state, where donations to nonprofits may be impacted by the economic slowdown associated with and following the Covid-19 pandemic. As dollars available for donation become more scarce, organizations that can signal strong stewardship via conservative financial reporting may be better able to attract public support. These findings also complement prior literature which confirms that donors are concerned with excess profits (Basu et al., 2022) as well as excess endowments (Core et al., 2006), as more conservative reporting can serve to mitigate these concerns.

In addition to our main analyses, we also conduct several supplemental analyses. First, we examine the role of large, sophisticated donors and their potential demand for accounting conservatism. On one hand, these donors have access to private information and the ability to restrict their gifts, indicating that they may be less reliant on financial reports to make their decisions about supporting a nonprofit. On the other hand, evidence suggests that large donors play an important monitoring role (Callen et al., 2003; Chang et al.,

<sup>6</sup> Although the likelihood of litigation in the nonprofit sector is substantially less than other sectors of the economy, cases of nonprofits and their auditors being sued in class-action lawsuits are certainly possible; examples include the Baptist Foundation of Arizona and the Foundation for New Era Philanthropy.

<sup>7</sup> We employ the Ball and Shivakumar (2005) model because it allows us to measure conservatism without measuring the relationship between earnings and share price. However, this does not imply that all of the predictions from our study will map into the predictions and findings of Ball and Shivakumar (2005). Differences in the nonprofit setting versus the for-profit private company setting allow us to make meaningful additions to the conservatism literature.

2023), and may prevent organizations from reporting aggressively. While we do find some evidence that large, sophisticated donors are associated with conservative financial reporting, we also find that nonprofits without this type of donor base are also report conservatively.

Next, we consider whether conservatism may be the result of an incentive to smooth or manage income. We rule out this possibility by testing whether nonprofits with excess cash, those with weaker governance, and those with lower-quality financial reporting are more or less likely to report conservatively. We find no differences between these groups indicating that conservative reporting does not appear to be driven by incentives to manage earnings. Third, we examine the role of debt contracting in nonprofit conservatism. While debt plays a significant role in the likelihood that a for-profit firm will report conservatively, we fail to find an effect in our setting. Finally, we partition our donations model results between organizations that are more commercial or donative in nature. The results of these tests indicate that our donation model results are driven by donative organizations, i.e. those that rely on donations for the majority of their funding.

The remainder of this paper proceeds as follows. Section II includes a literature review and research questions, section III model specifications, section IV sample selection procedures, and section V results for our empirical analysis. We include our concluding remarks in section VI.

## 2. Literature review and research questions

To date, nonprofit research related to financial reporting has focused on the measurement and determinants of profitability (Chang and Tuckman, 1990; Tuckman and Chang, 1992; Parsons and Trussel, 2008; Eldenburg et al., 2011; Basu et al., 2022). In early work, Chang and Tuckman (1990) document that the majority of nonprofits are actually profitable, with positive net income and average profit margins that exceed 10%. Additional studies by Parsons and Trussel (2008) and Tuckman and Chang (1992) support these original findings over extended time periods, with profit margins growing over time. Basu et al. (2022) examine the characteristics of profitable organizations, documenting that profitable nonprofits are larger and have more complex operations.

Further, Bradach and Foster (2005) find that management often establishes an earned income model to protect the nonprofit from volatility in donations and program expenses, and that donors seem to favor nonprofits that reduce the risk associated with this volatility by generating profits. Basu et al. (2022) document that government funding and public support are higher for more profitable nonprofits, however, their results also indicate that excessive profitability is associated with a reduction in these revenue sources in the period following excess profits. Additional nonprofit research finds that profits are used to make decisions about compensation (Brickley and Van Horn 2002), executive turnover (Eldenburg et al. 2004) and bonus pay (Balsam and Harris 2018).

Given the attention the consequences of nonprofit profitability have received in the literature, the next logical step in this body of research is the examination of how profits are recognized and measured. Properties of nonprofit earnings were first documented by Barragato and Basu (2007). Their study was motivated by the convergence of accounting regulations for the nonprofit and for-profit sector over the past several decades, and questioned whether similar accounting standards would generate similar earnings properties, or whether the difference in contracting and information needs between nonprofits and for-profits would lead to differential earnings properties. Barragato and Basu (2007) document that nonprofit earnings do display asymmetric persistence, similar to for-profit firms, however, their results also indicate that nonprofit accruals, on average, are not associated with asymmetric timeliness in a manner consistent with for-profit businesses.<sup>8</sup> The authors also document that nonprofits report more conservatively in response to regulatory and contracting incentives, as proxied by the size and leverage of the organization. Barragato and Basu (2007) encourage future studies that examine cross-sectional variation in nonprofit accounting and reporting practices, therefore, we build on their initial findings by not only examining the presence of unconditional conservatism in nonprofit reporting, but also developing cross-sectional predictions related to the reliance of nonprofit stakeholders on financial statements, as well as considering the impact of conservatism on future donations.

In the for-profit sector, conservatism is an important and prevalent feature of public company financial reporting.<sup>9</sup> Ball and Shivakumar (2005) hypothesize and find that the same degree of conservatism is not warranted in the U.K. private company setting, due to weakened demand for private company financial statements. Givoly et al. (2010) extend this research to U.S. companies, and find that firms with private equity report less conservatively than firms with public equity, consistent with these firms having lower litigation and agency costs. Hope et al. (2013) document similar results, but also find that conservatism among public companies varies depending on the reliance on financial statements. Pinnuck and Potter (2009) examine the existence of conservatism in local Australian government reporting and find no conservatism in the financial reports of the average local government, due to reduced demand for high-quality accrual-based financial reports from these entities. We extend this research and examine accounting conservatism in the nonprofit sector.

Given that conservatism in financial accounting is believed to be a way that management can signal they are serving as good stewards of an organization's assets and avoiding unnecessary risk, we expect this to be especially important in the nonprofit context.

<sup>8</sup> Barragato and Basu (2007) examine the period 1988–1997, which includes the 1993 issuance of SFAS No. 116 requiring charities to recognize unconditional promises to give as revenue in the current period. Derrick (2013) finds that while accrued revenue increased persistently in the postadoption period, reliance on cash contributions decreased. As such, it is possible that operating accruals now play a bigger role in nonprofits, which in turn may make accounting conservatism even more important for certain donors.

<sup>9</sup> See Basu (1997), Ball et al. (2000), Givoly and Hayn (2000), Ahmed et al. (2002), Watts (2003), Beaver and Ryan (2005) for the evolution of conservatism measures in for-profit financial reporting.

Nonprofit literature has established donors' preference for high quality reporting (Yetman and Yetman, 2013) as well as appropriate endowment levels (Core et al., 2006) and moderate levels of profitability (Basu et al., 2022). Reporting conservatively signals to donors and other stakeholders that the nonprofit is responsible in their management of the organization's finances and has taken into account the likelihood of future reductions in assets or receivables.

Examples of conservative financial reporting for nonprofits include increased reserves, such as allowances for pledges, grants, and receivables.<sup>10</sup> Nonprofits may also avoid accelerated repayment of debt, which could lead to greater interest expense than would otherwise be incurred. Additionally, given that nonprofit organizations are typically governed by a board of unpaid directors with an interest in guarding their own reputation and that of the nonprofit, they may have particular incentives to anticipate and report future contingencies and costs in line with conservative financial reporting.<sup>11</sup>

As discussed above, we contend that the nonprofit setting has similar attributes to both private and public companies in the for-profit sector. As with private companies, nonprofits do not have equity shareholders trading on exchanges in company stock, based on expectations about the future value of the firm. However, the stakeholders of nonprofits, primarily the donors whose funding enables nonprofits to execute their programs, are not inside owners, nor do they have an explicit contract with the organization (Van Puyvelde et al., 2012). As a result of this information asymmetry, donors rely on nonprofit financial information to assess whether the organization is safeguarding donated assets and fulfilling its charitable mission (Weisbrod and Dominguez, 1986). In this way, financial reporting serves a stewardship role, enabling donors to assess management's decision making with respect to donated assets.

Despite prior for-profit and nonprofit literature which suggests that nonprofit organizations will report conservatively. There are several reasons we might not expect nonprofits to report conservatively. First, nonprofit stakeholders may not require financial statements to assess the effectiveness of nonprofit activity. That is, financial statement information may not be of first order importance to donors and grantors in their giving decisions. If this is the case, we would not expect nonprofit organizations to be as concerned about their financial statement disclosures, especially as they relate to conservative financial accounting decisions. Second, litigation risks, a central determinant of conservative financial reporting in for-profit firms, are diminished for nonprofits. Therefore, while the risk of settlement payouts has been found to drive conservative reporting in the for-profit sector, the same motivations are all but absent in the nonprofit context. Third, the nonprofit sector uses substantially less debt than for-profit firms, and therefore we do not expect debt contracting to induce nonprofits to report conservatively. As a result, we aim to better understand the use of accounting conservatism in the nonprofit sector, and therefore pose our first research question as follows:

## 2.1. R1 – Does the financial reporting of nonprofit firms reflect accounting conservatism?

It is also possible that specific nonprofit characteristics drive the decision to engage in conservative accounting. We first consider the demand for financial statements for decision making. Ball and Shivakumar (2005) establish that in private company reporting, a diminished demand for financial statements exists due to private or "as-needed" communications with financial statement users. While we do not always expect nonprofit organizations to have the same motivations for conservative financial reporting as the private companies studied in Ball and Shivakumar (2005), we do contend that similar scenarios for reduced demand for financial statements exist. To test this conjecture, we identify a setting within the nonprofit sector where inside or private information exchange is customary, organizations that receive sizable government grants.

We argue that organizations requesting large amounts of grant funding are required to prepare and submit detailed grant applications including private information unavailable through standard financial reporting formats. This information, as well as the development of relationships with key personnel during the application process, will potentially reduce information asymmetries, as well as the need to rely on financial reporting for monitoring purposes. Additionally, the presence of government funding can be seen as an act of due diligence for the nonprofit, increasing the confidence of other donors as well (Brooks, 2000).

In sum, we posit that when the demand for nonprofit financial information is reduced, earnings' properties and accounting conservatism will be less meaningful. That is, in situations where financial statement users have access to private information the demand for external financial reporting is weakened. Therefore, following the findings of Hope et al. (2013) and Ball and Shivakumar (2005), we expect these organizations to report aggressively, similar to private company reporting. Accordingly, we pose our second research question:

## 2.2. R2 – Does accounting conservatism decrease when the demand for financial statement information decreases?

The decision to report conservatively may also be influenced by managerial incentives. Watts (2003) contends that executive compensation tied to profitability measures could have an impact on whether financial reports demonstrate accounting conservatism. That is, the need to meet certain income targets could motivate executives to report aggressively. However, Lafond and Watts (2008) document that the structure of bonus plans that provide a "cap" on payouts could encourage managers to be more conservative in their financial reporting, in order to smooth earnings into future time periods. Balsam and Harris (2018) examine the use of bonus

<sup>10</sup> While Form 990, Part X requires filers to report Pledges and grants receivable (Line 3) as well as Accounts receivable (Line 4) net of allowances, these allowance amounts are not reported separately precluding us from analyzing these amounts directly.

<sup>11</sup> Despite the incentives discussed, we acknowledge that we are unable to distinguish between nondiscretionary (inherently conservative GAAP accounting rules) and discretionary conservatism (managers actively reporting more conservatively) definitively in our study. Perhaps future research could utilize an experimental setting to disentangle these separate drivers for reporting conservatively.



compensation in the nonprofit sector and find evidence that bonuses serve as an incentive mechanism for nonprofit managers. We extend the findings of [Balsam and Harris \(2018\)](#) and the for-profit literature examining the relationship between management compensation and accounting conservatism and pose the following research question:

### 2.3. R3 – Does accounting conservatism change when a nonprofit offers executive incentive pay?

As noted above, conservatism can serve a stewardship role in circumstances where contracts are not formalized, or where information asymmetries exist ([Watts, 2003a,b](#)). These conditions may be particularly relevant for donors who want to ensure that dollars given to an organization are being used efficiently and effectively. Likewise, important structural elements unique to the nonprofit context, such as the absence of residual claimants and the non-prevalence of private litigation, make this an ideal setting in which to examine accounting conservatism.

Prior nonprofit research finds that the quantity and quality of financial information available to donors impacts the decision to give ([Weisbrod and Dominguez, 1986](#); [Tinkelman, 1999](#)). [Parsons \(2003\)](#) documents that when donors have greater confidence about a nonprofit's financial stability, they are more likely to donate. Taken together, these results suggest that if more conservative financial reporting improves the quality of the financial reports and reduces uncertainty about the financial health of the nonprofit, then conservatism will be positively associated with future donations. However, if donors make their decision to donate based on personal experiences with the nonprofit ([Gordon and Khumawala, 1999](#)), then the financial reporting, including accounting conservatism, would be irrelevant in their donation decision. Following this, we pose our fourth and final research question:

### 2.4. R4 – Does the presence of accounting conservatism affect a donor's decision to donate?

#### 2.4.1. Model specifications

We test our research questions using the model of asymmetric relation between accruals and cash flows developed by [Ball and Shivakumar \(2005\)](#). Specifically, to address our first research question, we apply the following base model:

$$ACC_t = \beta_0 + \beta_1 DCFO_t + \beta_2 CFO_t + \beta_3 DCFO * CFO_t + \beta_4 Size_t + \beta_5 Size * DCFO + \beta_6 Size * CFO + \beta_7 Size * DCFO * CFO_t + Industry\ fixed\ effects + Year\ fixed\ effects + \varepsilon \quad (1)$$

Where accruals ( $ACC$ ) are measured as change in working capital scaled by beginning of the year total assets.  $CFO$  is measured as net income less working capital / beginning of year total assets. Working capital is defined as: change in inventory + change in receivables + change in prepaid expenses – change in payables – change in deferred revenues – depreciation. All variables used to calculate  $ACC$  and  $CFO$  are drawn from IRS Form 990.<sup>12</sup>  $DCFO$  is equal to one if  $CFO$  is negative, and zero otherwise.<sup>13</sup> This construct enables us to examine the asymmetric loss recognition in the relationship between accruals and cash flows, consistent with [Ball and Shivakumar \(2005\)](#).<sup>14</sup> If nonprofit firms report conservatively, we expect the coefficient on  $CFO$  will be negative, and the coefficient on the interaction between  $CFO$  and  $DCFO$  will be positive, consistent with a reduction in accruals during periods of negative cash flows. Organization subscripts are omitted for ease of exposition. (See [Table 1](#)).

We also include control variables for size, nonprofit industry, and year.  $Size$  is measured as total assets / sample max total assets, therefore scaled on the interval between 0 and 1 following [Ball and Shivakumar \(2005\)](#). Industry fixed effects are based on the 12 major National Taxonomy of Exempt Entities (NTEE) industry classifications, and year fixed effects are included to control for the economic conditions present over our sample period.<sup>15</sup>

All study models are tested using robust regression techniques (iteratively reweighted least squares), identified by [Leone et al. \(2019\)](#) as the most effective method for mitigating the effects of extreme observations. Specifically, robust regressions assign a weight to each observation with higher weights given to observations that meet the assumptions underlying standard multiple regression. That is, robust regressions efficiently adjust for data outliers identified as a potential problem when working with IRS Form 990 data, from which we draw our sample ([Tinkelman and Neely, 2011](#)).<sup>16</sup>

<sup>12</sup> See [Table 1](#) for more detailed descriptions of variables and Form 990 references.

<sup>13</sup> Similar to for-profit firms, negative cash flows will impact the future viability of a nonprofit organization insofar as the organization is no longer able to satisfy obligations or fulfill the mission of the organization through funding its operating activities.

<sup>14</sup> We are careful to acknowledge that measuring cash flows from operations in the nonprofit context includes some limitations. Given that nonprofits do not have specific cash flow disclosure requirements, we are forced to use the Form 990 financial disclosures, which present challenges in identifying non-operating income items. These amounts would otherwise be included in the indirect method presentation of the statement of cash flows for a for-profit firm. As a result, we highlight here and in the discussion of our study limitations below that our measures of cash flows are not as precise as we would like. However, we have no reason to believe this lack of precision results in any systematic biases that impact our results one way or another.

<sup>15</sup> [Ball and Shivakumar \(2005\)](#) include fiscal year-end as an additional control variable. With respect to fiscal year-end we find very low variation in our sample with over 75 percent of observations either reporting calendar or June 30 year-ends. Nevertheless, our results are likewise robust to including fiscal year-end. We also consider the role of leverage, an additional control variable used by [Ball and Shivakumar \(2005\)](#) in our additional analyses.

<sup>16</sup> Our results are robust to alternatively using OLS regression with variables winsorized at the 1 and 99 percent level, OLS regression with standard errors clustered by organization, and models which use winsorized variables and have standard errors clustered by organization.

**Table 1**  
Variable Definitions.

Accrual and cash flow components:	
<i>Total Revenue</i>	Form 990 Part I, Line 12
<i>Total Expenses</i>	Form 990 Part I, Line 18
<i>Net Income</i>	= <i>Total Revenue</i> – <i>Total Expenses</i>
<i>Change in Inventory</i>	Change in Form 990 Part X, Line 8B
<i>Change in Receivables</i>	Change in Form 990 Part X, Line 4B + Part X, Line 3B – Part X, Line 19B
<i>Change in Prepaid Expenses</i>	Change in Form 990 Part X, Line 9B
<i>Change in Payables</i>	Change in Form 990 Part X, Line 17A + Part X, Line 18A
<i>Change in Deferred Revenues</i>	Change in Form 990 Part X, Line 19
<i>Depreciation</i>	Form 990 Part IX, Line 22A
Base model variables:	
<i>Change in Working Capital</i>	<i>Change in Inventory</i> + <i>Change in Receivables</i> + <i>Change in Prepaid Expenses</i> – <i>Change in Payables</i> – <i>Change in Deferred Revenues</i> – <i>Depreciation</i>
<i>ACC</i>	= <i>Change in Working Capital</i> / Beginning of Year Total Assets
<i>CFO</i>	= <i>Net Income</i> – <i>Change in Working Capital</i> / Beginning of Year Total Assets
<i>DCFO</i>	= 1 if <i>CFO</i> < 0; 0 otherwise
<i>Size</i>	= <i>Total Assets</i> / Sample Max <i>Total Assets</i>
Cross-sectional variables:	
<i>Single Audit</i>	= 1 for organizations reporting that they were required to file a Single Audit on their Form 990 (Part XII, Line 3a); 0 otherwise
<i>Bonus Pay</i>	= 1 for organizations with nonzero bonus pay reported on Form 990, Schedule J; 0 otherwise
<i>Perquisites</i>	= 1 for organizations reporting at least one perquisite provided to management on Form 990, Schedule J; 0 otherwise
Donations model variables:	
<i>Conservatism</i>	Three year rolling average of (( <i>ACC</i> * (-1))
<i>Donations</i>	Log of Total Contributions (Form 990 Part VIII, Line 1 h) – Government Grants (Form 990 Part VIII, Line 1e)
<i>Total Assets</i>	Log of Form 990 Part I, Line 20
<i>Program Efficiency</i>	Program Service Expenses (Form 990 Part IX, Line 25b) / <i>Total Expenses</i>
<i>Fundraising Expenses</i>	Log of Form 990 Part IX, Line 25d
<i>Governance Index</i>	Sum of 12 indicator variables for governance policies reported on Form 990 Part VI: conflict of interest policy, officers' conflict of interest policy, enforcement of conflict of interest policy, whistleblower policy, document destruction policy, CEO salary approval policy, officers' salary approval policy, no relations, no outsourced management functions, no document changes, information available on the organization's own website, board meeting minutes policy, committee meeting minutes policy, policy for the review of the organization's Form 990 prior to filing
<i>Government Grants</i>	Log of Form 990 Part VIII, Line 1e
<i>Program Service Revenues</i>	Log of Form 990 Part I, Line 9
<i>Age</i>	Log of the number of years since tax exempt status was granted
<i>Zero Officer Pay</i>	= 1 for organizations reporting zero on Form 990, Part IX, Line 5; 0 otherwise
<i>Operating Margin</i>	= ( <i>Total Revenues</i> – <i>Total Expenses</i> ) / <i>Total Revenues</i>
<i>Commercial</i>	= 1 for organizations with program service revenues / total revenues > 90%; 0 otherwise

Our second research question examines how the potential demand for financial statements relates to conservative financial reporting. Specifically, we partition model (1) by *Single Audit*, an indicator variable equal to one for organizations reporting that they were required to file a Single Audit on their Form 990 (Part XII, Line 3a), and zero otherwise. As of 2022, nonprofit organizations receiving over \$750,000 in government grants are required to complete an organization-wide financial statement and federal awards' audit referred to as the Single Audit.<sup>17</sup> Based on the discussion provided in Section II above, we predict that organizations with diminished demand, defined as those with large government grants, will have a negative sign on the *DCFO*\**CFO* coefficient indicating that in times of declining cash flows, organizations report additional accruals.

To test our third research question related to the impact of incentive compensation on an organization's reporting quality, we partition our sample by organizations reporting the use of bonus and perquisite pay on their Form 990, Schedule J (*Compensation Information*). We define *Bonus Pay* equal to one for organizations with nonzero bonus pay for any executive reported on Form 990, Schedule J, Part II, and 0 otherwise. We identify organizations offering *Perquisites* as those reporting the use of at least one perquisite type provided to any executive on Form 990, Schedule J, Part I, and 0 otherwise. We note that only organizations with executives who are paid in excess of \$150,000 are required to complete Schedule J with bonus and perquisite information. In our main analyses we include all sample observations and record those who have not filed a Schedule J as zeros for *Bonus Pay* and *Perquisites*, in untabulated analyses we confirm the robustness of our results to excluding observations that do not file a Schedule J.

Our final research question assesses donor reaction to accounting conservatism. To do so we include our measure of accounting conservatism in the standard donations demand model first popularized by Weisbrod and Dominguez (1986) and then used extensively in accounting and economics research. *Conservatism*, is defined as a three-year rolling average of (*ACC* \* (-1)), following the work of Givoly and Hayn (2000) as well as Ahmed et al. (2002).<sup>18</sup> Specifically, to address our fourth research question, we test the following

<sup>17</sup> <https://www.councilofnonprofits.org/nonprofit-audit-guide/federal-law-audit-requirements>.

<sup>18</sup> Our sample size is reduced to 9,082 observations when we use this measure given that four years of data are needed to calculate lagged three year rolling averages.

### donations model:

$$\text{Donations}_{t+1} = \beta_0 + \beta_1 \text{Conservatism}_t + \beta_2 \text{Size}_t + \beta_3 \text{Program Efficiency}_t + \beta_4 \text{Fundraising Expenses}_t + \beta_5 \text{Governance Index}_t + \beta_6 \text{Government Grants}_t + \beta_7 \text{Program Service Revenues}_t + \beta_8 \text{Age} + \beta_9 \text{Zero Officer Pay} + \beta_{10} \text{Operating Margin} + \beta_{11} \text{Direct Donations}_t + \text{Industry fixed effects} + \text{Year fixed effects} + \varepsilon \quad (2)$$

Where *Donations* represent one-year ahead logged direct donations.<sup>19</sup> Following Trussel and Parsons (2007), we use one-year ahead donations to allow donors time to view and react to conservative financial reporting. We include controls established by prior literature which include size, efficiency, fundraising expenses, governance, as well as alternative revenue sources, age, zero officer pay, operating margin and lagged donations (Weisbrod and Dominguez, 1986; Posnett and Sandler, 1989; Trussel and Parsons, 2007; Petrovits et al., 2011). We employ lagged year-end total assets to proxy for organizational size expecting that donations increase with *Size*. *Program Efficiency* is defined as program service expenses scaled by total expenses, i.e., the percentage of expenditures going to mission related expenditures. Following prior research (Weisbrod and Dominguez, 1986; Posnett and Sandler, 1989; Tinkelman, 1999; Okten and Weisbrod, 2000), we expect that donations will increase with nonprofit efficiency. *Fundraising Expense* is the natural log of the fundraising expenses incurred by the nonprofit. Prior studies (Weisbrod and Dominguez, 1986; Tinkelman, 1999) find that fundraising expenses are positively related to donations. We control for governance using *Governance Index*, defined as the sum of 12 indicator variables for governance policies reported on Form 990 Part VI (conflict of interest policy, officers' conflict of interest policy, enforcement of conflict of interest policy, whistleblower policy, document destruction policy, CEO salary approval policy, officers' salary approval policy, no relations, no outsourced management functions, no document changes, information available on the organization's own website, board meeting minutes policy, committee meeting minutes policy, policy for the review of the organization's Form 990 prior to filing) following Boland et al. (2020) and expect a positive relationship with donations following Harris et al. (2015).<sup>20</sup> In sum, we expect positive coefficients on *Total Assets*, *Efficiency*, *Fundraising Expenses*, and *Governance Index*.

Prior results are mixed regarding the association between donations and other sources of nonprofit revenue. Some researchers argue that donors refrain from making contributions to organizations that receive high levels of government grants or program revenues because they are considered to be substitutes for donations (Weisbrod and Dominguez, 1986; Posnett and Sandler, 1989; Callen, 1994; Yetman and Yetman, 2009). Others find that donation and non-donation revenue sources are complementary (Okten and Weisbrod, 2000; Petrovits et al. 2011). We include two variables to control for the presence of income sources other than donations: *Program Service Revenues* and *Government Grants*, both in natural log form.<sup>21</sup> Given the mixed results of prior literature, we do not predict signs for these variables.

Following Yetman and Yetman (2013) we also control for *Age* and *Zero Officer Pay*. *Age* is defined as the natural log of the number of years since the organization's exempt status was granted. *Zero Officer Pay* is an indicator variable equal to one for organizations reporting zero on their Form 990, statement of functional expenses, Part IX, Line 5: "Compensation of current officers, directors, trustees, and key employees", and zero otherwise. Finally, following Chang and Tuckman (1990) and Harris and Neely (2021) we also include *Operating Margin*, defined as total revenues less total expenses scaled by total revenues.

For completeness we also include lagged direct donations, i.e., direct donations measured contemporaneously with our conservatism test variable. This model specification is consistent with prior donations literature such as Petrovits et al. (2011) and Harris et al. (2015) where lagged donations are included to control for correlated omitted variables not otherwise included in the standard donations demand model. We also include industry and year fixed effects.<sup>22</sup>

### 3. Sample selection

To construct our sample, we begin with the seven most recent years of nonprofit data available for electronic IRS Form 990 filers from 2013 to 2019.<sup>23</sup> We use the organizations included in the IRS Statistics of Income (SOI) dataset which is drawn from IRS Form 990 information, digitized by the IRS.<sup>24</sup> The SOI file includes data for 501(c)3 public charities with assets of \$50 million or more as well as a random sample of smaller nonprofits (Feng et al., 2014).<sup>25</sup> While the SOI file does not include every nonprofit for every year, it does

<sup>19</sup> The IRS defines direct donations as the "amounts of contributions, gifts, grants, and bequests that the organization received directly from the public".

<sup>20</sup> Our results are robust to alternatively using the index of five governance mechanisms proposed by Boland et al. (2020).

<sup>21</sup> We use the natural log form of these variables as is standard in the nonprofit literature (for example Weisbrod and Dominguez, 1986; Petrovits et al., 2011), however, we also note that our results are unchanged when we alternatively scale these variables either by *Total Assets* or *Total Revenues*.

<sup>22</sup> Our donations model (2) is also robust to adding as additional control variables *Single Audit* as well as *Bonus Pay* and *Perquisites*.

<sup>23</sup> While partial year data is available for 2020 fiscal year ends as of the time of this writing, we elect to exclude this data to avoid any bias relating to the earnings attributes of early and late filers. Additionally, our sample begins with fiscal year 2013 given that we use IRS Form 990 data for electronic filers made available through Amazon Web Services beginning in 2010 and require two years of lagged data for our model variables.

<sup>24</sup> The full IRS Form 990 must be completed by all nonprofit organizations with gross receipts in excess of \$200,000 or total assets of at least \$500,000, smaller organizations are permitted to file Form 990-EZ (gross receipts between \$50,000 and \$200,000) or 990-N (gross receipts less than \$50,000). Recent work by Burks (2015) examined the occurrence of accounting errors in Form 990 filings and while Burks (2015) documents that public charities report errors at a rate that is 60% higher than those of for-profit reporters, he failed to document any systematic bias in the reporting that would bias our ability to use the information reported on the forms.

<sup>25</sup> Donations made to 501(c)3 public charities are tax deductible for donors.



reflect “over 90 percent of all nonprofit revenues” (Yetman and Yetman, 2013, page 1049).

Given the focus of our study and our reliance on accruals measures of conservatism, we screen the SOI data for organizations that self-report that they use cash basis, rather than accrual-basis accounting. This reduces our sample by 5,803 firm-year observations. Additionally, in the construction of our model variables, we require organizations to have lagged variables available in order to calculate change in working capital components. This requirement further reduces our sample by 7,394 firm-year observations. These data screens result in a final sample of 72,543 firm-year observations for 11,820 unique nonprofit organizations.<sup>26</sup> Table 2 reports these figures.

Table 3 provides industry and year distributions for our sample. As shown in panel A of Table 3, Human Services make up the largest category, at 23 percent of our sample. This is followed by Hospitals (21 percent), Health (14 percent), Education (13 percent), Universities (9 percent) and Arts, culture, and humanities (6 percent). Finally, the classification “Other industries,” which consists of Environment, International, Mutual benefit, Public & Societal benefit, and Religion, makes up approximately 14 percent of the sample.<sup>27</sup> Panel B presents the distribution of years in our sample. We find that while our sample is fairly evenly distributed between 2013 and 2019, despite our last two years (2018 and 2019) being slightly reduced as a result of delayed reporting.<sup>28</sup>

## 4. Results

### 4.1. Descriptive statistics

Table 4 provides descriptive statistics for the dependent and independent variables in our models. Overall, our average accrual and cash flow measures are consistent with amounts reported by Ball and Shivakumar (2005).<sup>29</sup> We also note that approximately 8 percent of our sample file a Schedule B indicating large donors. In terms of government grants, we find that just over 7 percent of sample organizations receive enough in government grants to require a Single Audit. And while a mere 3 percent of organizations provide bonus pay, approximately 20 percent offer perquisites to any one of their executives. With respect to our *Conservatism* measure we find that, on average, the nonprofits in our sample report conservatively by a magnitude of approximately 2 percent of total assets, over the preceding three years.<sup>30</sup> In terms of donations we find that our sample generates just shy of \$8.9 million in average contributions annually, with total assets just over \$200 million, fundraising expenses of \$866 million, program revenues of approximately \$81 million, and government grants a little less than \$3.9 million, on average. Sample organizations are relatively well run, spending on average 83 percent of total expenses on mission programs and reporting an average of ten out of twelve of the good governance practices included in our *Governance Index*.

### 4.2. Main analyses

Table 5 presents our base accruals model following Ball and Shivakumar (2005), which tests the asymmetric relation between accruals and cash flows. The role of accruals in lessening the volatility of cash flows predicts that the coefficient on *CFO* will be negative, while asymmetric loss recognition predicts that the coefficient on *CFO\*DCFO* will be positive. The findings in column (I) of Table 5 are consistent with this prediction. Specifically, on average, nonprofit organizations in our sample accrue 7 percent (coefficient on *CFO*) of cash flows when cash flows are positive, while 2 percent (0.073–0.055) of cash flows are accrued for when cash flows are negative. This finding is consistent with asymmetrically more unrealized loss recognition via accruals than gain recognition. In other words, on average, the negative association between accruals and cash flows is reduced when cash flows are negative, indicating that nonprofits are conservative in their reporting.

Column (II) of Table 5 includes controls for organizational size also following Ball and Shivakumar (2005). Here we find that our main results are robust to controlling for size, i.e. nonprofit organizations in our sample continue to report lower accruals in cash-negative years. As defined earlier, size is scaled on the interval zero to one, as such the coefficient on *Size* of 0.014 indicates that in positive cash flow years, accruals increase, on average, by approximately 1 percent of assets. The negative coefficient on *Size\*DCFO* suggests that in negative cash flow years, larger firms report fewer accruals. Further, the negative coefficient on the three-way interaction term *Size\*CFO\*DCFO* implies that in our sample conservatism decreases with firm size.

<sup>26</sup> The sample for our donations model is reduced for 2 reasons. First, as discussed above, we use one year ahead donations as our dependent variable to allow donors time to respond to conservative financial reporting, and not all observations included in our conservatism model have t+1 donations information available. Second, we restrict our sample to organizations that receive nonzero donations given that these organizations do not meaningfully capture donation response to conservatism. We do note, however, that our results are robust to including observations with zero donations.

<sup>27</sup> In untabulated analyses we run our main results by individual industries finding that all industries are consistent with our main results, i.e. report conservatively.

<sup>28</sup> In untabulated analyses we note that all analyses are robust to individual year samples.

<sup>29</sup> In untabulated analyses we secure that our results are robust to excluding observations with *CFO* close to zero (defined alternatively as 10% of total revenues around zero or \$1,000 plus or minus zero).

<sup>30</sup> Interestingly, in untabulated analyses, we find that our *Conservatism* measure is negatively correlated (*p-value less than 0.000*) with a common nonprofit measure of low-quality reporting, namely reporting zero fundraising expenses (Krishnan et al. 2006) confirming the ability of our measure to detect high-quality or conservative reporting.

**Table 2**  
Sample Selection.

<i>By Firm-year observation</i>	
Observations available from electronic Form 990 filings for IRS Statistics of Income organizations between 2013 and 2019	85,740
Less: Observations using cash basis accounting	–5,803
Less: Observations for which all model variables are not available	–7,394
Firm-year observations	<b>72,543</b>
Unique nonprofit firms	11,820

**Table 3**  
Sample Distribution.

<i>Panel A: Industry distribution</i>		
Industry group	Frequency	%
Arts, culture, and humanities	4,123	6%
Education	9,664	13%
Universities	6,414	9%
Hospitals	15,231	21%
Health	10,215	14%
Human services	16,835	23%
Other industries (environment, international, mutual benefit, public & societal benefit, religion)	10,061	14%
<b>Total</b>	<b>72,543</b>	<b>100%</b>
<i>Panel B: Year distribution</i>		
Year	Frequency	%
2013	10,531	14%
2014	10,600	15%
2015	10,678	15%
2016	10,676	15%
2017	10,109	14%
2018	9,988	14%
2019	9,961	14%
<b>Total</b>	<b>72,543</b>	<b>100%</b>

**Table 4**  
Descriptive Statistics.

	N	Mean	Median	SD	Q1	Q3
ACC	72,543	–0.001	–0.000	0.057	–0.014	0.012
CFO	72,543	0.019	0.019	0.099	–0.014	0.056
Size	72,543	0.001	0.001	0.001	0.000	0.002
Single Audit	72,543	0.074	0.000	0.261	0.000	0.000
Bonus Pay	72,543	0.034	0.000	0.180	0.000	0.000
Perquisites	72,543	0.202	0.000	0.401	0.000	0.000
Conservatism	53,057	0.018	0.013	0.040	0.000	0.035
Donations	53,057	8,888,527	1,443,445	22,000,000	253,541	6,163,197
Total Assets	53,057	206,456,162	67,157,592	444,000,000	22,400,000	169,000,000
Fundraising Expenses	53,057	866,728	90,751	2,135,113	0	724,632
Program Ratio	53,057	0.826	0.848	0.120	0.782	0.898
Governance Index	53,057	10.140	10.000	1.449	10.000	12.000
Government Grants	53,057	3,849,412	0	16,500,000	0	739,792
Program Service Revenues	53,057	81,572,974	12,226,154	195,000,000	490,752	56,400,000
Age	53,057	42.930	41.000	23.005	23.000	65.000
Zero Officer Pay	53,057	0.180	0.000	0.384	0.000	0.000
Operating Margin	53,057	0.041	0.034	0.271	–0.028	0.119

See Table 1 for variable definitions.

#### 4.3. Cross-sectional analyses – Demand for financial reporting

Table 6 presents results for research question two where we expect organizations that receive large enough amounts of government grants to require a single audit to have a reduced demand for their financial statements and report less conservatively. Consistent with our conjectures, we find that organizations that do not receive large government grants (column I), on average, accrue for 6 percent of cash flows in cash-positive periods, while 1 percent (0.056—0.044) are accrued for when cash flows are negative. This finding is consistent with lower accruals in bad times akin to public companies that report more conservatively. In opposition, organizations that

**Table 5**  
Main model of Accounting Conservatism.

Dependent Variable: $ACC_t$	(I) Coefficient <i>p</i> -value	(II) Coefficient <i>p</i> -value
$CFO_t$	−0.073*** 0.000	−0.073*** 0.000
$DCFO_t$	0.008*** 0.000	0.008*** 0.000
$CFO * DCFO_t$	0.055*** 0.000	0.061*** 0.002
$Size_t$		0.014* 0.079
$Size * CFO_t$		−0.062 0.700
$Size * DCFO_t$		−0.072*** 0.001
$Size * CFO * DCFO_t$		−8.241*** 0.000
Constant	−0.002 0.999	−0.002 0.999
Industry and year fixed effects	YES	YES
Standard errors clustered by EIN	YES	YES
N	72,543	72,543
Adjusted R <sup>2</sup>	0.0344	0.0348
Model <i>p</i> -value	0.000***	0.000***

\*significant at 10% level, \*\*significant at 5% level, \*\*\*significant at 1% level (two-tailed).

See Table 1 for variable definitions.

do report large government grant receipts (column II), accrue, on average 23 percent of cash flows when cash flows are positive, and 45 percent ( $0.233 + 0.214$ ) when cash flows are negative. We interpret this increase in accruals as aggressive reporting consistent with private company reporting and diminished demand for financial information. We believe this is particularly true of large granting organizations that have access to a plethora of detailed, private information through the grant making process.

**Table 6**  
Impact of Demand on Accounting Conservatism.

Dependent Variable: $ACC_t$	(I) <i>Single Audit</i> = 0 Coefficient <i>p</i> -value	(II) = 1 Coefficient <i>p</i> -value
$CFO_t$	−0.065*** 0.000	−0.207*** 0.000
$DCFO_t$	0.008*** 0.000	−0.003*** 0.008
$CFO * DCFO_t$	0.053*** 0.000	−0.320*** 0.000
$Size_t$	0.014 0.120	0.024 0.252
$Size * CFO_t$	−0.062 0.713	−0.893 0.214
$Size * DCFO_t$	−0.053** 0.019	0.161** 0.018
$Size * CFO * DCFO_t$	−5.035*** 0.000	−3.099** 0.029
Constant	0.001 0.999	0.004 0.835
Industry and year fixed effects	YES	YES
N	67,212	5,331
Adjusted R <sup>2</sup>	0.0326	0.1138
Model <i>p</i> -value	0.000***	0.000***

\*significant at 10% level, \*\*significant at 5% level, \*\*\*significant at 1% level (two-tailed).

See Table 1 for variable definitions.

#### 4.4. Cross-sectional analyses – Managerial incentives for aggressive reporting

Table 7 presents results for our managerial incentives hypothesis. Here we find that organizations providing their executives with bonus or perquisite pay are incentivized to report more aggressively. That is, in the partition of organizations providing any one of their executives with bonus pay (column II), we find that sample organizations accrue, on average 14 percent of cash flows when cash flows are positive, and 53 percent ( $0.137 + 0.395$ ) when cash flows are negative. This is consistent with these organizations actually reporting more aggressively, while organizations that do not provide bonus pay (column I) report, on average, 7 percent of cash flows when cash flows are positive, and 2 percent ( $0.072 - 0.054$ ) when cash flows are negative, consistent with more conservative reporting. We find similar results in columns III and IV for organizations not providing, and providing, perquisite pay.

#### 4.5. Role of conservatism in nonprofit donations

Turning to our fourth and final research question, related to the impact of conservatism on future donations, Table 8 presents results for a baseline donations demand model (column I), as well as a model which includes our conservatism variable (column II). The positive coefficient on our *Conservatism* test variable in column II suggests that organizations reporting conservatively are rewarded by donors. This is consistent with prior literature which finds that both the quality and quantity of financial information play a role in donation decisions (Weisbrod and Dominguez 1986, Tinkelman 1999). Comparing  $R^2$  statistics in columns I and II also indicates that accounting conservatism provides donors with incremental information in their decision to give. Taken together, these results indicate that conservatism is positively related to future nonprofit donations and that conservatism indeed provides donors with information important in their decision to give. This finding is an important addition to the donations demand literature as donors' reactions to conservative reporting have been previously unknown.

In addition to evaluating  $R^2$  statistics for our models, we also confirm the ability of our study models to provide meaningful results by assessing the effect sizes. Given that effect size is calculated independent of sample size, it is especially important for confirming the validity of our results, given that our models include over fifty thousand observations. In particular, we confirm an eta-squared for our determinants model of 0.99 indicating that model (1) is explaining nearly 100% of the observed variation in our dependent variable, ACC. We also find that our  $CFO*DCFO$  interaction term has an eta-squared of 0.95 indicating that this variable is capturing the vast majority of the variation in our conservatism model. In terms of our consequences model, we find an eta-squared of approximately 0.69 indicating that model (2) is explaining 69% of the variation in our *Donations* dependent variable. This is driven primarily by lagged *Donations* included in the model with an eta-squared of 0.39.

#### 4.6. Additional analyses

##### 4.6.1. Sophisticated donors

We also consider the role of large, sophisticated donors in accounting conservatism for nonprofits. Similar to the conjectures related to government grants in R2, nonprofit organizations provide large donors with access to private information about programs and spending, potentially reducing their dependence on financial reporting for monitoring or decision-making. In addition to these direct effects, the presence of sophisticated donors has also been found to signal stronger monitoring to other donors (Li, McDowell, and Hu, 2012) such that the demand for conservative accounting may be reduced for all donors. Giner and Rees (2001) support this conjecture finding that German corporations are less likely to report conservatively in light of private access to information provided to significant stakeholders directly.

Conversely, Cheng, Huang, and Li (2015) find that after activist investor interventions, when investors have access to management and the ability to closely monitor, firms increase conservative financial reporting. Additionally, sophisticated donors may also be receiving financial report-based information, and therefore organizations would also report conservatively as they inform these sophisticated donors. Prior literature in both the nonprofit and for-profit settings support this and suggest that sophisticated stakeholders use financial reports and are more skilled at understanding the information provided in those reports. For example, Yetman and Yetman (2013) find that only sophisticated donors discount the program expense ratio when poor financial reporting is detected. This finding suggests that sophisticated donors rely on financial information for decision making, and that sophisticated donors monitor management to reduce aggressive financial reporting. This conjecture is also consistent with evidence from the for-profit sector, where large U.S. institutional investors are found to be associated with more rather than less conservatism in the public company setting (Ramalingegowda and Yu, 2012). Given these competing arguments, we believe it is also interesting to study the impact of large, sophisticated donors on nonprofit accounting conservatism.

To do so, we partition model (1) by large, sophisticated donors using two proxies. First, we identify organizations that report non-zero permanently restricted net assets following Yetman and Yetman (2012) and add the additional requirement that organizations report zero pledges receivable.<sup>31</sup> Second, we isolate organizations filing a Form 990 Schedule B, required for organizations receiving

<sup>31</sup> We exclude organizations with pledges receivable (reported on Form 990 Part X, Line 3B) from this analysis because pledged contributions are revenue items that may be realized in future accounting periods; therefore, organizations receiving pledged contributions will have lower accounting conservatism (more accruals relative to cash flows). Since the focus of our study is on the monitoring role of large donors, we have omitted organizations with pledged receivables from our treatment group to avoid biasing our results. We are grateful to an anonymous reviewer for providing this suggestion.

**Table 7**  
Impact of Managerial Incentives on Accounting Conservatism.

Dependent Variable: $ACC_t$	(I)	(II)	(III)	(IV)
	<i>Bonus Pay</i>		<i>Perquisites</i>	
	= 0 Coefficient p-value	= 1 Coefficient p-value	= 0 Coefficient p-value	= 1 Coefficient p-value
$CFO_t$	−0.071*** 0.000	−0.145*** 0.000	−0.066*** 0.000	−0.104*** 0.000
$DCFO_t$	0.008*** 0.000	0.003* 0.065	0.008*** 0.000	0.002*** 0.000
$CFO*DCFO_t$	0.059*** 0.000	−0.390*** 0.000	0.056*** 0.000	−0.173*** 0.000
$Size_t$	0.014* 0.083	−0.008 0.876	0.009 0.455	0.016 0.122
$Size*CFO_t$	−0.085 0.599	1.304 0.240	0.045 0.828	−0.183 0.553
$Size*DCFO_t$	−0.076*** 0.001	0.328* 0.070	−0.102*** 0.009	−0.024 0.337
$Size*CFO*DCFO_t$	−8.098*** 0.000	4.582 0.188	−11.078*** 0.000	−4.626*** 0.000
Constant	−0.014*** 0.001	−0.007 0.524	−0.015*** 0.001	−0.002 0.313
Industry and year fixed effects	YES	YES	YES	YES
N	70,114	2,429	57,907	14,636
Adjusted R <sup>2</sup>	0.0340	0.0936	0.0326	0.0503
Model p-value	0.000***	0.000***	0.000***	0.000***

\*significant at 10% level, \*\*significant at 5% level, \*\*\*significant at 1% level (two-tailed).

See Table 1 for variable definitions.

**Table 8**  
Donations model.

Dependent Variable: $Donations_{t+1}$	(I) Coefficient p-value	(II) Coefficient p-value
$Conservatism_t$		0.531*** 0.000
$Total Assets_t$	0.044*** 0.000	0.044*** 0.000
$Program Efficiency_t$	0.073*** 0.000	0.110*** 0.000
$Fundraising Expenses_t$	0.011*** 0.000	0.011*** 0.000
$Governance Index_t$	0.001 0.961	0.001 0.859
$Program Service Revenues_t$	−0.005*** 0.000	−0.005*** 0.000
$Government Grants_t$	0.001*** 0.003	0.002*** 0.000
$Age_t$	−0.009** 0.017	−0.009** 0.015
$Zero Officer Pay_t$	−0.019** 0.016	−0.021*** 0.005
$Operating Margin_t$	0.001*** 0.001	0.243*** 0.000
$Donations_t$	0.930*** 0.000	0.926*** 0.000
Constant	0.231*** 0.000	0.137*** 0.001
Industry and year fixed effects	YES	YES
N	53,057	53,057
Adjusted R <sup>2</sup>	0.6634	0.6645
Model p-value	0.000***	0.000***

\*significant at 10% level, \*\*significant at 5% level, \*\*\*significant at 1% level (two-tailed).

See Table 1 for variable definitions.



contributions of \$5,000 or more from any one contributor following [Harris et al. \(2015\)](#) and once again add the requirement that organizations report zero pledges receivable. Using these variables, in untabulated analyses, we find that both partitions report conservatively.<sup>32</sup> That is, we find that organizations both with and without large, sophisticated donors, on average, accrue for more cash flows in cash-positive periods than they accrued for when cash flows are negative. This finding is consistent with both types of organizations reporting conservatively.

#### 4.6.2. Earnings management

Conservatism in nonprofit financial reporting might also be the result of an incentive to smooth or manage income. Prior literature ([Basu et al., 2022](#); [Core et al., 2006](#)) provides evidence that donors reduce support for organizations with too much accumulated wealth, or excess endowments. The nature of the nonprofit setting, therefore, gives us an opportunity to examine whether conservatism appears to be a strategy for managing success so as not to alienate future donors by reporting excess profitability. To do so, we consider settings where organizations might have greater incentives to smooth or manage their profits. Specifically, we focus on organizations with excess cash, weak governance, and low-quality reporting. We define excess cash in terms of organizations that have more than three times their annual operating expenses (total expenses) in accumulated cash holdings following [Calabrese \(2011\)](#). We identify organizations with weak governance as those with below sample median *Governance Index*, where *Governance Index* is defined as above following [Boland et al. \(2020\)](#).<sup>33</sup> We identify organizations with low quality reporting as those with zero fundraising expenses during periods with nonzero donations following [Yetman and Yetman \(2012\)](#), as well as PROG no change, an indicator variable equal to one for organizations with exactly the same program ratio from one year to the next following [Ling and Alston Roberts \(2017\)](#). We use these indicator variables to partition model (1) in the same way as our other cross-sectional analyses. Employing these alternative specifications, in untabulated analyses, we do not find evidence of any more or less conservative financial reporting in organizations with these characteristics. These additional findings indicate that organizations more likely to manage their earnings are not reporting any differently than those without these characteristics.

#### 4.6.3. Debt contracting

We also consider the role of debt contracting as a determinant of accounting conservatism in nonprofits, consistent with banks' preference for conservatism in order to assist with monitoring. Prior literature contends that while creditors such as banks and their intermediaries (debt rating agencies) enjoy preferential access to inside information, higher leverage is associated with higher rather than lower conservatism ([Ball and Shivakumar, 2005](#); [Chen et al., 2010](#); [Deng et al., 2018](#)). While we rely on the [Ball and Shivakumar \(2005\)](#) model for our tests, differences between our samples are evident. In particular, very few nonprofit organizations are rated by debt rating agencies ([Gaver et al., 2016](#)) and our sample reports relatively low mean leverage (9.3 percent, untabulated), rendering leverage less important in our setting.

Despite these differences, we are interested in the role debt plays in nonprofit accounting conservatism. Therefore, we test the robustness of our results to including leverage as an additional control variable as well as using leverage as an alternative partition variable in our model (1) specification (cut on sample median). In untabulated analyses, we continue to find that nonprofit organizations report conservatively after controlling for debt concentration using leverage (defined as the ratio of total liabilities to total assets) as well as in both partitions of above and below sample median leverage. Additionally, we test various alternative definitions for of debt, including indicators for outstanding bonds, any long-term debt (bonds, secured debt, or unsecured debt), as well as *any* outstanding debt (organizations with nonzero interest expense, liabilities, or bond holdings). Across all partitions we continue to find that both organizations with more and less debt report conservatively. Finally, we also test the impact of a continuous measure of long-term debt (defined as the natural log of total of end-of-year outstanding bond, secured, and unsecured liabilities). We interact this continuous measure with our cash flow measures in the same way we interact our *Size* measure. Using this interaction model with our continuous measure of long-term-debt we once again find that organizations with and without higher levels of long-term-debt continue to report conservatively. We believe these results underscore the differences in funding and reporting incentives between for-profit and nonprofit organizations.

#### 4.6.4. Financial statement audit and audit committee

In addition to the impact of sophisticated donors, governance, and debt on nonprofit conservatism, we also test the influence of an outside audit or review on conservative financial reporting. Our expectation is that organizations receiving a financial statement audit or review would be encouraged to report conservatively consistent with auditors increased litigation risk (albeit relatively lower than the for-profit context). Unfortunately, the construction of our sample does not provide for much variation in these variables. That is, given that SOI nonprofits are the largest US nonprofits, we are not surprised that 93 percent of our sample receives a financial statement audit, and 96 percent of our sample receives either a financial statement audit or a review. Nevertheless, we partition our sample based on these variables and find that organizations both with and without a financial statement audit (or audit or review) report conservatively.

Additionally, given that board members with financial reporting backgrounds may be better monitors over financial reporting, we alternatively test the impact of an audit committee on nonprofit accounting conservatism. To do so we identify organizations reporting

<sup>32</sup> These results are unchanged if we alternatively omit organizations with pledged receivables from our subsamples rather than specifying our sophisticated measures equal to zero for these observations.

<sup>33</sup> We find similar inferences when we alternatively define our weak governance measure as organizations with below 6 governance metrics.

the existence of an audit committee (Form 990, Part XII, Line 2c) and test whether board members with influence over financial reporting and incentives to monitor financial reporting increase conservative accounting. While we do find substantial variation in the adoption of an audit committee in our sample (mean of 0.630), our results indicate that organizations both with and without an audit committee report conservatively. We believe these are somewhat surprising results given that the audit committee plays the most direct financial monitoring role in the nonprofit setting. However, we conjecture this result may be due to the fact that the audit committee generally reviews and approves the financial statements after they have been prepared with little input into management's discretion over accrual transactions. Additionally, it is possible that a nonprofit that does not have the resources to support an audit committee will choose to report conservatively to provide evidence of high quality reporting in lieu of this additional governance measure.

#### 4.6.5. Industry variation

Given that the industry classifications included in our sample vary substantially from one another, in additional untabulated analyses we partition our conservatism model by the seven industry groupings presented in Table 3, Panel A. Specifically, we expect industries to vary in regulatory oversight due to the nature of their business, as well as interactions with state and federal governments for funding. As a result, we might expect those with greater regulatory oversight to report more conservatively. Despite these differences, we continue to find that each industry grouping reports conservatively, consistent with our main results.

#### 4.6.6. Donation reliance

Our final set of additional analyses relates to our donations model. In addition to the donations model presented in our main analyses, we also present Table 9 which partitions our donations model by organizations more and less reliant on donations. Our expectation is that organizations that are more reliant on contributions from donors will be more concerned with donor preferences related to conservative reporting. That is, given that donors have known preferences for charitable organizations to be profitable, but not too profitable (Basu et al., 2022), we expect a stronger relationship between donations and conservatism at more donation reliant organizations. Results in column I of Table 9 support this conjecture in that we find a strong, positive relationship between conservatism and future donations in non-commercial organizations.<sup>34</sup> Column II also indicates that this relationship is not present in commercial organizations (those that do not rely on donations as a main source of funding), consistent with the notion that organizations with less donation reliance will be less concerned with conservative reporting.

### 5. Concluding remarks

Using a sample of over 72,000 firm-years from over 11,000 unique organizations over a seven-year period, we examine whether nonprofits engage in conservative financial reporting. Adapting the accruals-based model developed by Ball and Shivakumar (2005), we find evidence consistent with the conjecture that nonprofit firms, on average, report conservatively. That is, average nonprofit firms in our sample report earnings that display conservative properties consistent with those documented at publicly traded firms (Basu, 1997; Ball et al., 2000; Watts, 2003a,b). When we consider nonprofit characteristics that represent a decreased need for financial reports, we find a reduction in the asymmetric loss properties of earnings. Specifically, organizations that receive large government grants are significantly less likely to report conservatively. Additionally, we provide evidence that nonprofits that offer incentive pay to their executives are also less likely to report conservatively, consistent with the bonus structure providing an incentive to report more aggressively. Finally, when we include conservative financial reporting in the donations demand model, we find evidence consistent with donors valuing conservatism. We interpret this finding to mean that conservatism serves a stewardship role, providing high quality information to donors, and reducing the risk that donated funds are not used properly.

Our study is not without limitations. As previously noted, nonprofits share some financial attributes with both public and private for-profit companies, but the mission, operating characteristics and regulatory environment of nonprofits are fundamentally different from the for-profit sector. While the appropriate financial information is provided by nonprofits to employ the conservatism model from Ball and Shivakumar (2005), the use of this model generates the implicit assumption that the relationship between accruals and cash flows in the nonprofit sector resembles that of the for-profit sector. While we acknowledge the potential flaws in that assumption, we cannot identify a reason why the use of this model would induce any systematic bias into our models, or related findings. Additionally, we recognize that by using the SOI dataset of nonprofit organizations our sample is comprised of the largest US nonprofit organizations. We accept that these larger organizations are likely more sophisticated and, as we have noted, almost all receive a financial statement audit. Therefore, while we believe our results are generalizable to other large US nonprofit organizations, we hesitate to extrapolate our findings to smaller, less sophisticated organizations. Finally, we acknowledge as a limitation of our study that the conservatism variable we use in our donations model is a rather crude measure of reporting conservatism. That is, while we believe our paper contributes to our collective understanding of the assessment tools used by nonprofit stakeholders to evaluate financial reporting in the sector, we concede that our conservatism measure lacks precision.

Notwithstanding these limitations, we believe our findings will be of great interest to managers, regulators, and those that engage in academic research in the nonprofit sector as they provide initial insights into the properties of earnings in this important sector of the

<sup>34</sup> We define commercial following Aggarwal et al. (2012) as an indicator variable equal to one for organizations with program service revenues to total revenues greater than 90%. Therefore, non-commercial organizations are those with program service revenues to total revenues less than 90% or those not primarily dependent on commercial revenues to fund their organization.

**Table 9**  
Donations model – Commercial and Non-commercial Organizations.

Dependent Variable: $Donations_{t+1}$	Non-commercial (I) Coefficient p-value	Commercial (II) Coefficient p-value
$Conservatism_t$	0.575*** 0.003	0.218 0.221
$Total Assets_t$	0.036*** 0.000	0.048*** 0.000
$Program Efficiency_t$	0.106*** 0.000	−0.055 0.442
$Fundraising Expenses_t$	0.008*** 0.000	0.015*** 0.000
$Governance Index_t$	0.003 0.135	−0.007 0.165
$Program Service Revenues_t$	−0.002*** 0.001	0.129*** 0.000
$Government Grants_t$	−0.001** 0.033	0.003** 0.011
$Donations_t$	0.943*** 0.000	0.795*** 0.000
$Age_t$	−0.017*** 0.000	0.033*** 0.000
$Zero Officer Pay_t$	−0.024*** 0.003	−0.041** 0.034
$Operating Margin_t$	0.001*** 0.000	0.024** 0.021
Constant	0.138*** 0.001	−0.575*** 0.000
Industry and year fixed effects	YES	YES
N	34,910	18,147
Adjusted R <sup>2</sup>	0.6743	0.5670
Model p-value	0.000***	0.000***

\*significant at 10% level, \*\*significant at 5% level, \*\*\*significant at 1% level (two-tailed).

See Table 1 for variable definitions.

economy. Moreover, these limitations provide potential avenues for future research with respect to the characteristics of nonprofit financial reporting, and how information is accessed and used by nonprofit organizations' stakeholders.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Data availability

The data is publicly available.

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