FINANCIAL HEALTH OF NONPROFIT ORGANIZATIONS

By

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Comprehensive Abstract

Nonprofit financial health is the least developed among the three sectors – public, private nonprofit --and often focuses on vulnerability, capacity, and stability (E. I. Altman, Haldeman, & Narayanan, 1977; Ashley & Faulk, 2010; Carroll & Stater, 2009; Chang & Tuckman, 1991, 1994, 2010; Chikoto & Neely, 2014; Foster & Fine, 2007; Greenlee & Trussel, 2000; Gronbjerg, 1992; Kingma, 1993; Pfeffer & Salancik, 2003; Trussel, 2002; Yan, Denison, & Butler, 2009). The definitions of each dimension, method of measurement, and their degree of importance in evaluating financial health have not been sufficiently clarified within existing research. At the level of nonprofit organization, these are important because financial position is closely tied to mission and quality programs. At the level of sector, the sustainability of nonprofits plays a significant role alongside public and private organizations, in better connecting people to themselves, their communities and opportunities for quality of life and well-being. This makes a study of nonprofit financial health one of practical assessment, economic and management theory, but also grounded in a normative connection to valuable role of nonprofits in the American system of organizational life.

This research asks three questions. First, how can nonprofit organizations monitor financial measures to guard against financial distress? Second, how do successful organizations strategize to build stable and sustainable financial health? And third, how do membership associations build sustainable financial health? Three main limitations of previous research are addressed through empirical analysis. First, nonprofit research focuses on a very limited pool of financial ratios. Second, nonprofit studies fail to examine the factors that explain the difference between large organizations' financial health and smaller organizations' health (or lack thereof). Third, nonprofit research largely focuses on ordinary nonprofits, neglecting the other types of

nonprofit organizations, including membership associations. These three limitations are the basis of the proposed empirical articles.

A second gap in previous research concerns the consistent finding that larger organizations report better financial health (Carroll, 2005; Carroll & Stater, 2009; Chikoto & Neely, 2014). We do not yet understand which characteristics of larger organizations contribute to their better financial health. A more precise definition of financial health might provide insight into the differentiating factors that contribute to this finding, particularly inclusion of multiple time frames and management strategies such as nonprofit lobbying. Also, exploration of unique characteristics of nonprofits, including volunteer workforce may provide insights.

The third gap addressed by this research is the lack of finance studies focused on a critical subset of nonprofits: membership associations. Scholarship broadly recognizes the role of nonprofit organizations in supplying goods and services, as well as acting at times as agents of the government in delivering on social needs. Berry (1999), however, has notably brought attention to the contributions of nonprofits to political life and discourse, and specifically that membership organizations are engaging more than ever within this space. Membership associations are categorized as expressive organizations that promote values, affiliative organizations that promote social intercourse, and instrumental organizations that provide useful services to members (Mason, 1996). These organizations are also likely to have more representational infrastructure, in terms of internal decision making, as well as produce more excludeable benefits. For these reasons, the determinants of financial health may be enabled and constrained in ways that cannot be presumed for all nonprofits.

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Article 1: Financial Ratios to Predict Financial Distress in Nonprofit Organizations

Abstract

Nonprofit organizations in the U.S. are often viewed as vulnerable and at high risk for failure given tight operating margins, competition from the private sector, and overreliance on unpredictable public sector grants and contracts. Nonprofits that compete with private sector organizations do not have the same access to capital as private organizations, which can put them at a disadvantage in some markets. They also are subject to changes in policy that affect government contracts, fees or tax benefits. And, nonprofits often prioritize program services over administrative staff, making expansive fundraising efforts difficult. Understanding financial health can help navigate these difficult circumstances faced by nonprofit organizations.

This research asks how can nonprofit financial managers predict financial distress? Prior research on nonprofit vulnerability and distress has focused on four financial measures (Greenlee & Bukovinsky, 1998; Greenlee & Trussel, 2000; Hager, 2001; Trussel, 2002; Tuckman & Chang, 1991), but fails to examine other possible measures. By contrast, research on financial health in the private sector context examines twenty-two potential financial ratios and identifies five that best predict an organizations' risk potential for bankruptcy (E. I. Altman, 1968, 2000; Barth, Beaver, & Landsman, 1998; Sudarsanam & Lai, 2001). This research examines eleven financial ratios to determine which factors are associated with financial distress. The selection of ratios explicates potential consequences of strategies that may emerge when various aspects of the financial picture are coupled together and underscored. Ratios are tested and compared using a dataset of 247 nonprofit housing organizations that are also members of NeighborWorks America for the years 2011-2013. Findings indicate both internal and external measures are important for monitoring and detecting financial distress, and also highlight the need for a

portfolio approach when using ratio analytic tools for the purpose of generating decision-making information within nonprofit organizations.

Keywords: nonprofit financial management; nonprofit financial health; financial distress

Introduction

      Financial ratio analysis is a useful financial management tool for nonprofit organizations and as the sector continues to grow, it is increasingly important to understand how to make the best use of this financial management tool. There are many quantitative or qualitative measures that a nonprofit manager may choose to analyze and monitor to make decisions for the organization. Once a possible threat of financial distress is identified, nonprofit managers face a number of potential choices to improve the financial position for the future. This research can help clarify which financial ratios should be monitored to help guard against distress and may suggest areas for change to deal with distress, should it be predicted.

      Prior research on nonprofit vulnerability and distress often focuses on four specific financial ratios (Chang & Tuckman, 1991; Greenlee & Bukovinsky, 1998; Greenlee & Trussel, 2000; Hager, 2001; Trussel, 2002) but fails to examine other possible measures (see Zietlow (2012) as an exception). By contrast, research on financial health in the private sector context examines twenty-two potential financial ratios and identifies five that best predict an organizations' risk potential for bankruptcy (E. I. Altman, 1968, 2000; Barth et al., 1998; Sudarsanam & Lai, 2001). Other research in the nonprofit sector includes longer lists of financial measures, but many of the measures are specific to a single industry (Bazzoli, Chan, Shortell, & D'Aunno, 2000; Cleverley, 1989, 1995; Ozcan & McCue, 1996; Pink et al., 2006; Zeller, Stanko, & Cleverley, 1996). For example, Pink et al (2006) examines twenty financial ratios, of which ten are specific to hospitals. Findings indicate that both traditional and nonprofit measures are associated with financial distress. In particular, expense related items are more important than program demand or revenue related measures.

The paper proceeds in the following manner. The first section discusses financial distress and its importance as a dimension of financial health. The second section discusses the development of financial ratios in the public and private sectors, followed by the third section describing nonprofit financial ratios. The fourth section presents measurements of financial distress and other financial measures that may be associated with distress. These are then applied and tested using a U.S. dataset of nonprofit housing organizations. A discussion of the analysis is presented in the sixth section. The final section presents results and examines implications and limitations.

Nonprofit Financial Health and Distress

Nonprofit organizations are often viewed as having a high risk for failure given tight operating margins, competition from the private sector, and over reliance on unpredictable public sector grants and contracts. Nonprofits that compete with private sector organizations do not have the same access to capital as private organizations, which can put them at a disadvantage in some markets. They also are subject to changes in policy that affect government contracts, fees or tax benefits. And, nonprofits often prioritize program services over administrative staff making expansive fundraising efforts difficult. A better method to predict of financial distress can help nonprofit managers navigate the difficult circumstances of their organizations.

There is extensive research on nonprofit financial health or financial condition although little research focuses specifically on financial distress. Rather, nonprofit literature typically discusses financial health mainly using one of four terms: vulnerability, flexibility, stability, or capacity. An organization is financially vulnerable if "it is likely to cut back its service offerings immediately when it experiences a financial shock" (Tuckman and Chang 1991, p. 445).

Scholars describe financial flexibility as the absence of vulnerability (Carroll and Stater 2014; Greenlee and Trussel 2000; Hager 2001; Tuckman and Chang 1991), while financial stability is defined as the absence of revenue volatility (Carroll and Stater 2009; Chikoto and Neely 2014). Finally, financial capacity is defined as having "resources that give an organization the wherewithal to seize opportunities and react to unexpected threats" (Bowman 2011; Chikoto and Neely 2014).

Failure and bankruptcy are two terms commonly used in private sector research. Failure, in a financial and economic sense, is when "the rate of return on invested capital is lower than prevailing rates on similar investments" (Altman 2006, p. 28). Business failure is very close to bankruptcy, where the business ceases operations and leaves unpaid obligations as a result (Dun & Bradstreet 1994). Bankruptcy has both legal and financial definitions. In a financial sense, it is when total liabilities exceed a fair valuation of net assets. Legally, it is when a corporation files a bankruptcy claim. A popular predictor of bankruptcy (both legal and financial) is Altman's Z-score, which uses bankruptcy filings to create a predictor of financial distress in the private sector (Altman 1968, 1994, 1997, 2000). The Z-score is designed to detect potential bankruptcy prior to the point of both financial and legal bankruptcy.

A direct application of Altman's Z-score to the nonprofit sector is not particularly useful, but his work does suggest a method to develop such a score for nonprofits. Altman's Z-score was developed using data from bankrupt organizations. The laws governing and business practices surrounding nonprofit bankruptcies are sufficiently different from private sector bankruptcy. While private sector businesses can be forced into liquidation through bankruptcy laws, nonprofits may dissolve either voluntarily or involuntarily for failure to continue operating for a specified period of time or abandonment of the original socially beneficial activity under which

they were established. This makes analysis of bankruptcy in particular less useful in the nonprofit context.

Many nonprofit organizations have a certain amount of value in their mission or reputation, which translates into a volunteer and donor base. This makes it difficult to assess a "fair valuation of net assets" as one might do in the private sector. Nonprofits are also unable to assess the price of their goods and services in the same way that private sector businesses do. Nonprofit organizations receive donations and often provide goods or services based on a consumers needs or ability to pay, rather than market based pricing. Although, methods to calculate the social value of an organization for accounting purposes have been proposed (Mook, Quarter, & Richmond, 2007), they are not often implemented.

An organization is in distress if it does not have sufficient liquidity and is at risk of potential failure or bankruptcy. Distress is closely related to vulnerability, but does not incorporate financial flexibility as a requirement (as in Tuckman & Chang model). Distress is the first stage that an organization experiences and is also the most critical for organizational longevity. Predicting distress is meaningful to all nonprofits, but particularly of interest to those organizations that operate with a current services level. For example, an organization may purposefully operate at a "current services" level and simply spend on services, whatever it receives from member contributions; a neighborhood housing association is an example of such an organization. This type of organization does not need flexibility to be considered financially healthy, and would be classified as vulnerable given Tuckman & Chang's theory of vulnerability. For many small and new organizations, preventing financial distress may be the primary concern.

If an organization does not properly monitor and evaluate potential distress, they must focus their attention on the day-to-day problems of cash flows and are unable to plan sufficiently and strategize for the future. There are a variety of possible financial ratios that an organization can choose to monitor on a regular basis. This research seeks to identify which ratios might help an organization predict potential distress. The next section discusses financial ratio analysis and how it is applied in private and public sector organizations. Then, nonprofit sector ratio analysis is reviewed.

Financial Ratio Analysis

A financial ratio is a relationship between two numbers drawn from an organization's financial documentation. Typical financial documents from which data is taken for analysis are the balance sheet, operating statement or tax documents. Financial ratios provide a variety of information about an organizations financial condition such as information on the organization's ability to meet its short-term immediate obligations (measures of liquidity). Ratio analysis is an important financial management tool for nonprofit organizations and as the sector continues to grow; it is increasingly important to understand how best to make use of this financial management tool. Research on ratio analysis for the nonprofit sector began to develop in the early 1980s, beginning with work that discussed the application of private sector ratio analysis to the nonprofit sector (Chabotar 1989, Zietlow 2012). Later research developed sector specific ratio analyses or indices (Tuckman and Chang 1987, Cleverly 1990). Other early works from Cleverly and Chabotar). Industry specific ratios are also discussed in research on hospitals (Cleverly 1989, Pink et al 2006), and arts organizations (Hager 2001).

Financial ratios are a private sector management tool that migrated to the nonprofit sector. It is well understood and accepted that the main objective of private sector organizations is profit maximization. Early research on nonprofit organizations recognized the mismatch in objectives between the private and nonprofit sectors (Chabotar 1989). He also states that emphasis is on "stewardship and accountability" to provide services without intent to earn profit. However, it may be the case that some nonprofit organizations have a financial objective of building reserves, in addition to stewardship and accountability (Calabrese 2011).

The private sector uses ratio analysis, especially to determine the credit-worthiness of organizations (Shermach, 1998; Reinbach, 1998; Totty, 1999) or predict bankruptcy (Altman 1978). Altman (2006) uses multiple discriminant analysis of financial ratios and finds that five ratios are a reliable predictor of bankruptcy in private firms: 1) working capital as a percentage of total assets, 2) retained earnings as a percentage of total assets, 3) earnings before interest and taxes as a percentage of total assets, 4) market value of equity as a percentage of book value of total debt and 5) sales as a percentage of total assets (Altman 1968, 2000; Altman, Haldeman & Narayanan 1977; Eidelman 1975). Altman's Z score (1968) was developed to maximize the value of the five traditional ratio categories. Altman combines the five measures at predetermined weights based on prior research to create a score for distress. This approach to measuring financial distress provided an alternative to size as a proxy for financial health, which had been the most commonly used measure until the development of Altman's score. It is the most consistently referenced approach by both researchers and practitioners (Lacher, Coats, Sharma, & Fant, 1995) and provides a thoughtful framework for developing a similar measure for nonprofit organizations.

The majority of these private sector financial models are focused on ratios that measure profitability of an organization, which limits their usefulness for some nonprofit organizations, although research in the nonprofit sector sometimes uses measures of profitability when examining financial health (Weech-Maldanado Neff and Mor 2003). For example, research on hospitals often focuses on operating profit margin as the main measure of financial performance (Cleverley 1990; Chabotar 1980 and Weech-Maldanado Neff and Mor 2003). This makes direct application of the Altman score to the nonprofit context problematic, especially for nonprofits providing public goods.

Nonprofit Ratio Analysis

Some research acknowledges that most ratio analysis is taken directly from the private sector but few studies propose many unique measures for nonprofit specific ratio analyses (Trussel, Greenlee, and Brady 2002). There are also attempts to identify financial measures that contribute meaningful information to assess organizational performance for nonprofit financial managers and researchers. For example, Ritchie and Kolodinsky (2003) examine 16 financial measures that represent three dimensions of performance. The three dimensions they find are fundraising efficiency, public (donors, not government) support and financial performance. This provides a guideline for identifying the areas of ratio analyses that might be relevant in the nonprofit context.

Nonprofit financial health is the least developed of the three sectors because the nonprofit sector didn't grow significantly until later in the mid-20th century. This research often focuses on vulnerability, capacity, and stability (E. I. Altman et al., 1977; Ashley & Faulk, 2010; Carroll & Stater, 2009; Chang & Tuckman, 1991, 1994, 2010; Chikoto & Neely, 2014; Foster & Fine,

2007; Greenlee & Trussel, 2000; Gronbjerg, 1992; Kingma, 1993; Pfeffer & Salancik, 2003; Trussel, 2002; Yan et al., 2009). The definitions of each dimension, method of measurement, and their degree importance in evaluating financial health have not been sufficiently clarified in existing research.

A theory of financial vulnerability was originally proposed by Chang and Tuckman (1991) where an organization is defined as financially vulnerable if the likely response to a financial shock is a reduction in services. Four financial ratios are proposed as the primary predictors of vulnerability 1) inadequate equity balances, 2) highly concentrated revenue, 3) low administrative costs and 4) low operating margins. They argue that the presence of the four factors creates a financial situation of vulnerability and that converse of the four factors results in better financial health. Empirical tests of Tuckman-Chang find some support for the four dimensions, offer improvements in model specification for testing and explore alternative definitions of vulnerability. One alternative definition of vulnerability defines an organization as vulnerable if three consecutive years of net losses are reported (Gilbert, Menon, & Schwartz, 1990; Greenlee & Trussel, 2000). Application of this definition only finds three of the four dimensions theorized by Tuckman and Chang as significant, the equity ratio, administrative ratio and operating margins. No support was found for a relationship between the revenue concentration index as a predictor of financial vulnerability. Other empirical studies have confirmed that greater dependence on one source of revenue is associated with a higher vulnerability factor (Kingma, 1994). Tuckman and Chang find that average revenue and equity levels for at-risk and severely-at-risk organizations are lower, which is consistent with findings in that larger organizations, when measured by total revenue or equity balance are healthier.

Other findings from tests of the Tuckman-Change measures include the long-term debt to long-term assets ratio is higher for at-risk organizations and that vulnerable nonprofits have lower current ratio (less liquidity). Also, at-risk organizations have a higher percentage of revenue from program services than the average organization. The ratio of revenue to assets is larger for at-risk group but smaller for severely-at-risk. Trussel (2002) finds that more vulnerable charities have more debt, higher concentration of revenues, lower surplus margins, and that organizations are smaller. Hager (2001) finds that the Tuckman-Chang measures may help predict the closure of some nonprofit organizations, but do not have utility for all types of arts nonprofits. Finally, they classify the organizations into subsectors based on their primary mission and find that organizations in the healthcare and support categories are more vulnerable. All of these studies have some limitations; most commonly the studies are cross-sectional and offer no control for prior financial condition. Also, most studies include organization size as a control variable and expand on sector classifications, but provide little analysis of the differentiating characteristics that explain the correlation (Greenlee & Trussel, 2000; Hager, 2001).

Prior research neglects the most imminent threat of financial distress and mostly focuses on potential program reductions (vulnerability) rather than potential closure due to financial hardship. A distinct difference between the two threats is the financial tools and resources that an organization might make available to remedy the problem. For distress, an organization must focus on very short term resources including cash, easily converted to cash resources, and open lines of credit that are necessary to provide payment to creditors. For vulnerability, an organization can look to longer term and less flexible resources like budget savings from hiring gaps. The next section introduces the variables that might be used by financial managers to monitor financial distress and describes how they are measured and calculated.

Measuring and Predicting Distress

Financial distress reflects short-term concerns such as an organization's ability to meet its short-term demands like payroll or payments to creditors. Cash and resources that are easily converted to cash are the important resources for examining distress. The value of an organizations short term demands such as payroll expenses and short term debt represent the other major factors for measuring distress. Financial ratios to measure an organizations ability to meet these short-term financial demands are consistent across the three sectors and based on solvency and liquidity. Therefore, the dependent variable is measured using three traditional ratios used to assess solvency and liquidity (equations 1-3): the current ratio, the cash or quick ratio, and the total days of cash on hand.

The current ratio is calculated as:

$$Current\ Assets\ /\ Current\ Liabilities \qquad [1]$$

The quick or cash ratio is calculated as:

$$Cash\ +\ Marketable\ Securities\ /\ Current\ Liabilities \qquad [2]$$

The total days of cash on hand is calculated as:

$$Cash\ and\ Cash\ Equivalents\ /$$
$$(Total\ Expenses\ -\ Depreciation\ +\ CP\ LTD/365) \qquad [3]$$

Ratios for independent variables are discussed in Table 1 and are based on a review of literature researching assessments of private financial performance, public fiscal health and nonprofit financial health at the organizational level.

The first set of ratios is traditional private sector ratios. The second set of ratios is common to development of public fiscal health indices. The final set of ratios is common to

nonprofit financial health analyses. There is significant overlap between the traditional private sector ratios and those included in nonprofit financial health analyses, reflecting the common practice of nonprofit organizations viewing finances similar to a private sector business. The remainder of this section provides a short discussion on the three categories of financial ratios included in the analysis and how they are measured.

Private Sector. There are five traditional categories of financial ratios used in the private sector which are liquidity, profitability, activity, financial leverage, and shareholder or return on investment. These measures primarily focus on internal organizational characteristics that managers have direct control over, rather than external measures that managers must respond to. Many of these ratios are used in the public and nonprofit sectors as well – both in research and in practice. Three of the major categories of ratios from the private sector are not of much use for direct application in the nonprofit sector due to differences in financial structure and operations

Table 1: Variable Descriptions

Variable	Description
Current Ratio	Current assets divided by current liabilities. A measure of liquidity (S. A. Ross, Westerfield, & Jordan, 1998).
Quick Ratio	Sum of cash, cash equivalents and receivables divided by current liabilities. Measures liquidity of an organization. A measure of liquidity (S. A. Ross et al., 1998).
Days of Cash	Sum of cash, marketable securities, and unrestricted investments divided by total expenses minus depreciation [(total expenses-depreciation)/days in period (S. A. Ross et al., 1998).
Defensive Interval Ratio	Sum of cash, marketable securities and receivables divided by average months expenses. A measure of the adequacy of the resources to support the mission (S. A. Ross et al., 1998).
Program Service Demand Ratio	Program Service Expense divided by total revenues. The ratio measures the portion of total revenue that is needed to support program services. This measure is used by NeighborWorks America to evaluate demand.
Dependence on Contributions and Grants	Revenue from grants and contributions divided by total revenues. Measures the dependency of the organization on contributory income (Parsons, 2007).
Administrative Efficiency Ratio	Management and general administrative expenses divided by total expenses (Tinkelman & Mankaney, 2007).
Financial Sustainability Ratio	Unrestricted revenues divided by total expenses. A measures used by NeighborWorks America to evaluate the percentage of expenses covered by unrestricted revenues (Calabrese, 2011).
Capital Ratio	Net Assets divided by Total Assets. A measure of the percentage of total assets paid for through equity (S. A. Ross et al., 1998).
Days in Payables	The sum of payables and accrued expenses divided by expenses minus depreciation. Total value divided by 365 days. A measure of how quickly the organization is able to pay it short-term obligations (S. A. Ross et al., 1998).

First, since shareholders do not exist in the nonprofit context, although some research theorizes donors as shareholders (Wedig, 1994), for the purpose of predicting distress measures related to Returns on investment and shareholders are not examined. Return on investment ratios provide information on the amount of profit, relative to the assets employed to produce that profit and

this concept has translated into measures evaluating nonprofit program returns or donor returns, which will be discussed later. While the primary purpose of a nonprofit organization is to promote their mission and maximize program expenditures, research finds that many nonprofit organizations accumulate profits (Calabrese, 2011). Profits in the nonprofit context are measured in terms of unrestricted net assets. The four ratios used in Altman's analysis that are examined for this study include.

- *Working capital / total assets*
- *Retained earnings / total assets,*
- *Earnings before interest and taxes / total assets,*
- *Revenue / total assets*

Research indicates that nonprofits with higher levels of earnings and revenues are less likely to report financial problems (Cleverley, 1989; Ritchie & Kolodinsky, 2003; Zietlow, 2012) and therefore the expectation is that the above ratios will have a negative relationship with distress measures.

Public Sector. From public financial management (Wang, 2014) we know that indicators for monitoring financial performance include categories of external, internal, and measures of efficiency. Some of the public sector ratios are not as useful to nonprofit organizations, which have different revenue sources and program demand drivers. Two internal measures that are useful include assessments of debt and a measure of profitability that applies better to the nonprofit context than the profitability measures from the private sector. Carroll and Stater (2013) use two variables for financial flexibility, (which are similar to two ratio measures typically used to assess the financial condition (Finkler 2005, Jegers and Verschueren 2006, Keating et al 2005), debt margin and total margin. Debt ratio is calculated as an organization's

year-end liabilities as a proportion of its year-end assets (greater values represent a higher

proportion of debt to assets and less financial flexibility). Total margin, another measure of

profitability of an organization, is calculated as the proportion of net assets to total revenue

(greater values indicate greater financial flexibility). Common ratios considered for this analysis

from the public sector include:

- *Population growth*

- *External economic indicators (e.g. inflation)*

- *Net assets or change in net assets*

- *Fund operating surplus (deficit)*

- *Debt ratio*

- *Total margin*

- *Asset allocation efficiency*

Population growth has less influence on nonprofit organizational finances because public

sector tax revenues and program demands are closely related to population, but nonprofit

revenues are not linked to population in the same manner.

Nonprofit Sector. From nonprofit financial health, we have many ratios that are common to

the private sector. Similar to the private sector measures, most of these measures are also

internally focused, rather than externally focused. Fundraising efficiency is most often discussed

in the context of its impact on donor behavior (Tinkelman & Mankaney, 2007). Organizations

may not spend enough on fundraising, but grants or program revenue may have more of an

impact in the short term. Dependence on contributions and grants may also be similar, if

fundraising campaigns are difficult to organize in the short term and it may take organizations

time to establish and build relationships with large donors that could help swing cash flows in the

short term. An organization that has a stable and sizeable base for contributions may be more protected in the long term, but not have additional resources to draw upon in the short term. Program demand is an external measure that might have more influence in the longer term. The measure of revenues per employee indicates how many incoming resources are available to cover payroll and might be a useful predictor of potential distress. Too many employees can put a strain on resources, especially if too many employees are devoted solely to program service delivery and insufficient attention is given to raising resources and revenues. For an organization that is highly reliant on program fees, the measure may not be meaningful, but for many nonprofit organizations, program fees do not cover many of their operating expenses and they must rely on grants and contributions more. The last two measures are internal and involve potential expenses. An organization that can keep expenses and outstanding debt low would be less likely to experience distress. (These measures are used in practice at NeighborWorks America to evaluate the financial condition of their member organizations).

- *Fundraising efficiency*
- *Dependence on contributions and grants*
- *Program demand*
- *Revenues per employee*
- *Days in payables*
- *Defensive interval ratio*

Nonprofit managers have a large selection of financial measures that they may choose to monitor to help predict and guard against financial distress. And, many management decisions are made with the intent to influence these measures, but it is unclear which of these measures might have an association with financial distress. Detecting distress is important for all nonprofit

organizations, and especially those whose destabilization holds potential to reverberate into many other areas of social need, such as housing insecurity. The next section discusses nonprofit housing and the potential influence of financial distress on nonprofit housing organizations.

Nonprofit Housing Organizations and Financial Distress

Nonprofit housing organizations provide affordable housing and help families build pathways to homeownership in communities across the nation. Preservation of affordable housing has long been a priority of government and nonprofit organizations. Housing is an important necessity for all families and quality of housing influences the health and well-being of residents (C. E. Ross, Reynolds, & Geis, 2000; Sampson, 2003). Homeownership in particular is part of the American dream and nonprofit housing organizations offer a variety of programs to facilitate this dream for many families. Permanent, affordable housing is important to families as it provides stability for children to grow and prosper. Programs such as foreclosure mitigation and counseling, revolving loan funds, housing preservation, single family home construction and first time homebuyer programs support permanent housing for families that would not be able to afford it without nonprofit programs. Stable and safe communities are important for local governments and communities as well. Initiatives to help rebuild communities and help families restore community housing throughout America's cities have been ongoing for many years (Bashir, 2002)and nonprofit housing organizations play a critical role in sustaining housing programs.

When nonprofit housing organizations experience financial distress and closure, families and communities that rely on their programs for support may face housing disruptions or difficulties. Family health and wellness are negatively affected by housing disruptions when

parents have trouble reporting to work due to housing problems or children struggle in school if they must move often or do not have stability. Communities suffer when nonprofit programs are not available (Lin, Rosenblatt, & Yao, 2009) and families must turn to direct government resources such as public housing, which puts pressure on public waiting lists. And, if families must abandon foreclosed homes when programs are not available in their area to help, then neighborhoods suffer as well.

Community organizers and activists have fought for decades to preserve and rebuild decaying housing on their local streets. One such initiative, which began in the late 1960s, was the genesis of an organization called Neighborhood Housing Service (NHS) created in 1968 to revitalize neighborhoods in Pittsburgh, Pennsylvania. Local community organizers recruited local banks to work with families to revitalize the neighborhood through loans to the community and creation of a local foundation to provide revolving loan funds. NHS produced enough success in Pittsburgh that it eventually became the model for community housing programs throughout the nation. Congress supported the expansion of NHS programs and in 1978 officially created the Neighborhood Reinvestment Corporation (NRC) to promote reinvestment in older neighborhoods through financial support of nonprofit housing organizations and collaboration with local residents, community leaders, financial institutions and local government.

The NRC, now known as NeighborWorks America, is a state-sponsored nonprofit organization that provides management support and grants for a network of local nonprofit housing organizations across the nation. Currently there are over 260 housing organizations in the network. NeighborWorks America is a congressionally chartered corporation that monitors the organizational performance of a network of nonprofit housing organizations. Their purpose is

to support their member organizations through financial grants and management assistance to strengthen communities and expand opportunities for affordable housing throughout the nation. In 2011, NeighborWorks America aided over 260,000 families, provided $4.2 billion in direct investment to housing organizations, possessed a rental portfolio of more than 90,000 housing units, and issued 21,800 training certificates (NeighborWorks America 2013).

Data and Methods

Data for this analysis come from 247 U.S. nonprofit housing organizations that are members of NeighborWorks America for the years 2011-2013. NeighborWorks America collects financial and organizational data from nonprofit managers on an annual and quarterly basis to monitor and evaluate organizational performance. Organizations that are members of the NeighborWorks network of nonprofit housing organizations are required to submit financial data annually. Organization managers submit financial data from audited financial statements that are compliant with Generally Accepted Accounting Principles (GAAP) as part of their organizational assessment process. Three-year averages of the variables as reported to NeighborWorks are used for the analysis. Descriptive statistics are reported and ordinary least squares (OLS) regression estimation is used to test and analyze results from the model.

Results and Conclusions

Financial distress reported by NeighborWorks organizations varies greatly as can be seen by comparing those organizations that report high and low values for the three distress measures. The summary statistics for the three measures of distress for those organizations with the 50 highest current ratios and 50 lowest current ratios are presented in Table 2.

Table 2: Summary Statistics for 50 Highest and 50 Lowest Organizations

	Mean	Std Deviation	Min	Max
Top 50 Organizations				
Current Ratio[*]	16.190	21.052	5.855	121.936
Quick Ratio[^]	11.848	18.954	0.240	115.177
Days of Cash[*]	447.168	301.828	12.380	1321.177
Bottom 50 Organizations				
Current Ratio[*]	0.810	0.277	0.135	1.203
Quick Ratio[^]	0.389	0.232	0.015	0.983
Days of Cash[*]	56.942	37.142	4.358	183.152

The average current ratio of the top 50 organizations is rather high at 16 with a standard deviation of 21 while the bottom 50 has a much lower average current ratio of 0.81 and a standard deviation of only 0.28. The lowest value of the current ratio is 0.13 reflecting that there are no organizations in the sample that have a negative distress score. The average quick ratio for the top organizations is 11.8 with a standard deviation of 18.9. In contrast, the average quick ratio for the bottom organizations is only 0.389 with a standard deviation of 0.232. For all organizations in the sample, summary statistics are presented in Table 3.

Table 3: Summary Statistics for All Organizations

	Mean	Std Deviation	Min	Max
Dependent Variables				
Current Ratio	4.991	10.736	0.135	121.936
Quick Ratio	3.351	9.277	0.015	115.761
Days of Cash	210.847	217.663	4.358	1321.177
Independent Variables				
Defensive Interval	9.304	8.719	0.372	56.861
Program Demand	0.826	0.252	0.000	2.930
Dependence on	0.532	0.279	0.0329	1.971
Contributions and Grants				
Administrative Efficiency	0.120	0.095	0.000	0.754
Financial Sustainability	1.085	0.779	0.228	12.949
Capital Ratio	0.534	0.2522	-1.204	0.991
Days in Payables	48.740	62.092	0.841	614.817
N	260			

On average, the organizations have a current ratio of 4.99, a quick ratio of 3.35 and days of cash

on hand is 210. Regression results are reported below in Table 4.

Table 4: Regression Results

	(1) Current Ratio		(2) Quick Ratio		(3) Days of Cash	
Defensive Interval	0.050	$(0.074)^{***}$	0.403	$(0.066)^{***}$	21.978	$(0.695)^{***}$
Program Demand	2.618	(2.775)	3.364	(2.460)	44.637	$(25.823)^{*}$
Dependence on	3.077	(2.402)	2.069	(2.130)	-43.975	$(22.357)^{*}$
Contributions and Grants						
Administrative Efficiency	-8.519	(6.798)	-0.424	(6.029)	42.809	(63.274)
Financial Sustainability	0.194	(0.800)	0.371	(0.709)	18.278	$(7.440)^{*}$
Capital Ratio	9.356	$(2.850)^{***}$	7.574	$(2.527)^{**}$	115.638	$(0.093)^{***}$
Days in Payables	-0.011	(0.000)	-0.009	(0.009)	-0.045	(0.093)
Constant	-6.577	$(3.811)^{*}$	-6.965	$(3.380)^{*}$	-92.428	$(35.472)^{**}$
N	256		256		256	
R^2	0.247		0.207		0.840	
F	11.66		9.23		558.	

Standard errors in parentheses
$^{*}p < 0.10,$ $^{**}p < 0.01,$ $^{***}p < 0.001$

The defensive interval, program demand, dependence on contributions and grants, and a measure of financial sustainability are all positively associated with financial distress measures when looking at the current ratio and the quick ratio. However, the defensive interval and the capital ratio are the only measures with statistical significance. This indicates that organizations with more securities and receivables per month will have lower levels of distress. Similarly, maximizing program demand along with contributions and grants will also decrease chances of distress. The positive association between lower levels of distress and financial sustainability tells us that organizations with more unrestricted revenues in relation to expenses are more financially healthy. This is consistent with research examining organizations accumulation of unrestricted net assets (Calabrese 2012).

Two variables were found to have a negative relationship with the both the current and quick ratio: administrative efficiency ratio and days in payables are negatively associated. Since these are both internal measures financial managers have the ability to influence them on a day-to-day business by making strategic choices to balance administrative costs and payment collection. Interestingly, these measures represent expenses or outputs in resources, indicating that an organization should limit total commitments to guard against distress.

Findings for the third measure of distress, days of cash on hand were similar, but not the same. Positive relationships were found with some of the same variables including the defensive interval, program demand, administrative efficiency, capital ratio and financial sustainability. Five of the ratios were significant with administrative efficiency being the only one not significant. Negative associations are reported for dependence on contributions and grants and days in payables.

The difference in findings with respect to program demand and dependence on contributions and grants indicates that low program demand and high dependence on contributions and grants are harmful to cash balances, but having no significant relationship with the other distress measures means that they are not as important in monitoring financial distress as the expense related measures. It is useful to know which of the measures should be prioritized and convenient that financial managers do not as easily control the two less significant measures in the short term.

The findings that debt measures are important are potentially specific to the housing sector and other industries that rely heavily on debt for major projects. This finding would apply best to other nonprofit organizations that have significant debt for major projects such as hospitals or universities. Reliance on donations is not a predictor and is another factor that may be specific to the housing industry. Prior research indicates that revenue sources of nonprofit organizations are associated with the types of good, public vs. private (Wilsker and Young 2010) and housing for NeighborWorks may be more like a private good than a public good. Future research may choose to do a qualitative analysis of days of cash policies to learn more about organizations that hold either very high levels of cash, which may be inefficient or low levels of cash, which may expose the organizations to distress.

Overall, these findings indicate that both internal and external measures matter. Financial distress is about an organizations ability to pay its short-term obligations and keep its doors open in the short run. Essentially, this translates to an organizations cash management strategy, but it also includes management of payroll, short term program expenses and debt management practices. While financial vulnerability looks at a longer time frame and benefits from manipulation of financial capacity and flexibility, financial distress deals with more immediate

planning horizons that result in a need to monitor debt commitments and revenue streams more closely than programs and administrative costs. What gets measured gets managed and therefore focusing on the financial ratios that are associated with lower levels of financial distress may help an organization decrease their chances of experiencing distress and potential closure. Alternatively, an organization might end up focusing only on internal measures that are under their control, but have no association with distress or may shift their focus to a longer term operating strategy that is unsuccessful because the short-term view was neglected.

This research points to mostly traditional private sector financial ratios for monitoring, but the disconnect between profits and profitability that make application of private sector theory problematic are a limitation of the study. Future research may incorporate better measures of the social values that provide the mission and vision for nonprofit organizations and may result in different findings.

Article 2: How Nonprofit Organizations Use Strategic Management to Create

Financial Sustainability

Abstract

Actively managing an organizations' financial condition is a fundamental part of a successfully performing organization. Scholars do not yet know which management strategies large, financially healthy organizations employ to create sustainable financial health. This research examines the organizational characteristics and strategic management activities associated with better financial health in larger nonprofit organizations. The goals are to first arrange important literature for an explanatory model of nonprofit financial sustainability that can then be used by nonprofit scholars in generalizable settings. Secondly, to combine financial and organizational data and information, to test the model on a large-N sample of 501(c)3 nonprofit organizations from the U.S. National Center for Charitable Statistics for the year 2011 in order to determine which strategies have the greatest influence on building sustainable financial health. Results indicate support for some degree of strategy employed by nonprofit organizations' financial sustainability. As expected, those organizations that actively exploit their environment through external lobbying are associated with higher levels of financial sustainability. Buffering strategies of concentrating revenue and manipulating administrative efficiency are also associated with higher levels of financial sustainability. However, results indicate there is a peak point at which administrative efficiency no longer provides positive value to returns on assets.

Keywords: financial health, nonprofit management, strategic management, financial sustainability

Introduction

Nonprofit organizations in the U.S. are often viewed as having poor financial health given characteristics such as tight operating margins, competition from the private sector, and over reliance on unpredictable public sector grants and contracts. Nonprofit organizations are also commonly viewed as being highly influenced by their external environment in an almost fatalistic manner – that nonprofit finances are largely out of the organizations' control. However, there are also many successful nonprofits that are highly stable and have robust financial health that operate in the same environment and under the same conditions. We know from previous research that organization size is associated with less vulnerability, greater financial capacity and more financial stability (Chang & Tuckman, 1994; Greenlee & Trussel, 2000). We do not yet know which management strategies these organizations employ to generate a difference. This research fills this gap by examining financial management strategies of financially healthy organizations. Nonprofits that compete with private sector organizations do not have the same access to capital as private organizations, which can put them at a disadvantage in some market conditions. They are also subject to changes in policy that affect government contracts, fees or tax benefits. Understanding strategies to improve financial health can help nonprofits navigate these difficult circumstances.

Sustainable financial health is concerned with the longer-term survival of the organization and ability to provide more and/or better services (Bowman, 2011). This research applies public management theory (O'Toole and Meier 1999, Meier and O'Toole 2001) to the nonprofit financial context and leads to a proposition that the ability of a nonprofit to create and maintain structure, buffer from the environment and exploit financial opportunities will influence whether an organization is financially sustainable.

The strategic management activities that a nonprofit engages to influence financial health include creation and maintenance of structures such as buffering strategies such as concentrating or diversifying revenue sources (Carroll and Stater 2009), increasing or decreasing administrative efficiency (Tuckman and Chang 1991) and limiting revenues to less risky sources (Alexander et al 1999, Chikoto and Neely 2014; Kingma 1993). Nonprofits also choose to exploit their environment by engaging in political activities such as lobbying (Leroux & Goerdel, 2009) and recruiting volunteers and other forms of public support.

Thus, the article proceeds as follows: the next section defines sustainable financial health and describes strategies employed by nonprofit managers; the third section summarizes the literature on nonprofit financial health and strategic management of nonprofits; the fourth section describes testable hypotheses regarding strategic management; the fifth section describes variables for the empirical analysis, the empirical strategy employed, and data used; the sixth section presents results, and finally the last section discusses policy implications of the empirical findings and limitations to the study.

Definitions and Dimensions of Nonprofit Financial Health

Financial health, generally, has been defined as "the likelihood that the…organization might continue to produce…over time" (Ashley & Faulk, 2010, p. 45). However, the literature on financial health uses many interrelated, but disparate concepts when describing and testing financial health. Table 1 provides an overview of definitions and measures found in nonprofit literature.

Table 1: Definitions and Concepts in Nonprofit Financial Health Research

Concept	Definition	Measure	Citation
Financial health	Absence of vulnerability and low levels of fixed costs; NPOs that can shed expenses when revenues decline are better able to reduce financial vulnerability (and deficits) than firms with high levels of fixed costs.	Defined as the ratio of fixed costs (occupancy, interest, and depreciation) to total expenses. Taken with revenue concentration, these two variables are measures and indicators of NPO financial health.	Calabrese 2012; Greenlee & Tuckman, 2007
Financial health	An organization's operating reserves	Operating reserve balance	Greenlee and Trussel, 2000; Keating, Fischer, Gordon, and Greenlee, 2005; Calabrese 2013
Financial health	Financial health speaks to the likelihood that the recipient organization might continue to produce those purchased outputs over time.	Administrative ratio, equity balance, revenue concentration, and operating margin are used to measure nonprofit financial health	Ashley and Faulk 2010
Financial condition	Not explicitly defined, but modeled using financial flexibility and stability	Not specified	Carroll and Stater 2009
Vulnerability	Discusses vulnerability as the absence of revenue volatility.	Uses a proxy for vulnerability, revenue diversity which is measured using the HHI and assumes less concentration and more diversification is better.	Calabrese 2012
Vulnerability	If an organization is likely to cut back its service offerings immediately when it experiences a financial shock	Administrative ratio, equity balance, revenue concentration, and operating margin are used to measure nonprofit financial health	Tuckman and Chang
Predictability	The ability of a nonprofit organization to determine annual changes in its revenues accurately	Not specified	Kingma 1993

Table 1. Definitions and Concepts in Nonprofit Financial Health Research (continued)

Concept	Definition	Measure	Citation
Flexibility	To what degree can an organization supplement its future cash flows to cover any unforeseen needs or to take advantage of any unforeseen opportunities?	Not specified	Zietlow (2012)
Flexibility	Flexibility is strategic liquidity— the ability to tap liquid funds, including those made available by foundations, grantors, or arranged borrowing, to fund strategic initiatives such as program expansion, geographical expansion, new hires, mergers and acquisitions, social enterprises, and collaborative ventures.	Not specified	Zietlow and Seidner (2007)
Flexibility	Converse of Tuckman/Chang definition of vulnerability: if an organization does not cut back its service offerings immediately when it experiences a financial shock	Not specified	Hager 2001
Capacity	Resources that give an organization the wherewithal to seize opportunities and react to unexpected threats	Not specified	Chikoto and Neely 2014; Bowman
Capacity	Having more resources to further the organizational mission	Not specified	Chikoto and Neely 2014
Stability	Being able to weather any fluctuations in revenue streams in order to continue to exist	Not specified	Chikoto and Neely 2014
Financial efficiency	Financial efficiency is the proportion of the donated dollar that goes directly to programs or the cost of purchasing a unit of out- put from a recipient organization	Administrative ratio and fundraising ratio	Ashley and Faulk (2010)

Table 1. Definitions and Concepts in Nonprofit Financial Health Research (continued)

Concept	Definition	Measure	Citation
Financial performance	Performance is defined as return-on-equity. Any firm's ability to remain viable is directly linked to its capacity to generate capital for both replacement of existing assets and new growth.	ROE = operating margin x total asset turnover x 1/1-nonoperating revenue x 1/equity financing	Cleverly (1990)
Financial performance	NFP performance is reflected in two distinct dimensions: efficiency and effectiveness	Not specified	Anthony and Young (2003)
Financial performance	Financial performance in general, and ROE in particular, is a function of three basic market/strategic factors: market structure, competitive position, and firm strategy.	Defined as ROE = operating margin x total asset turnover x 1/1-nonoperating revenue x 1/equity financing	Cleverly 1990; Buzzell and Gale 1987
Financial performance	*Definition not specified*	Measured as total revenue, annual operating budget, and financial reserves.	Jackson and Holland (1998)
Financial performance	*Definition not specified*	Total revenue and gift income.	Olson (2000)

Research on financial health of nonprofit organizations most often refers financial health as a general concept or focuses on one of four dimensions of financial health. The four mostly commonly discussed dimensions are vulnerability, stability, capacity and flexibility. Chang and Tuckman's seminal article (1991 p. 446) builds a test of financial vulnerability and defines an organization as vulnerable "if it is likely to cut back its service offerings immediately when it experiences a financial shock." Hager (2001) uses Chang and Tuckman's definition of vulnerability, but discusses it in terms of flexibility, which he argues is the converse of vulnerability. Financial flexibility is present when an organization has the ability to respond to threats and opportunities from the environment (Hager, 2001; Hodge & Piccolo, 2005). Miller (2001, 2003) argues that financial capacity is the most important measure of financial health.

Still other research focuses on stability, which is sought by nonprofit managers and is generated by reducing volatility in revenue streams (Carroll & Stater, 2009; Chang & Tuckman, 1994; Yan et al., 2009). Kingma (1993) argues that stability is a misleading phrase because of natural fluctuations in revenues and expenditures that may occur in cycles and says revenue predictability is the goal. And finally, financial sustainability is yet another term offered to describe financial health (Zietlow, 2012). Financial sustainability is defined as "the ability to generate resources to meet the needs of the present without compromising the future" (Bell, 2011, p. 10). Yet, some scholars focusing on financial sustainability use the term interchangeably with a more common term in nonprofit research, organizational survival (Zietlow, 2012). This research seeks to improve our understanding of how these dimensions are related to management strategies. The next section discusses the how each of these terms fit together to form our understanding of financial management and lead to identification of management strategies associated with financial health.

Theoretical Perspectives on Nonprofit Financial Health

Theoretical perspectives of financial health for nonprofit organizations highlight its multi-dimensional and temporal nature. It is well recognized that financial health has multiple dimensions and involves multiple time frames (Hendrick, 2004). Although there is little consensus about exact time frames, there is general agreement about a short-term dimension and a long term dimension, although financial health is often described as having three or more dimensions (Bowman, 2011; Kloha, Weissert, & Kleine, 2005; Singla, Comeaux, & Kirschner, 2014).

Public sector research provides additional perspective on dimensions of financial health in descriptions of the four types of solvency (Groves and Valente 1994), which capture the temporal and dynamic nature of financial health. The four types are cash solvency, budgetary solvency, long-run solvency and service solvency. Cash solvency describes the shortest time frame, budgetary a middle-time frame and long-run is the longest of the four types. Service solvency does not have temporal aspect. A three-dimension time framework based on concepts of sustainability, flexibility and vulnerability has also been used in scholarship as an example of a comprehensive model of financial health for studying public, provincial organizations within the Canadian context (Cabaleiro et al, 2013).

Financial health in nonprofit organizations is alternatively conceptualized as a continuum, with strong financial health on one end and poor financial health on the other end with stable financial health in the center (Prentice, 2015). This continuum recognizes the multiple dimensions of financial health, but does not include a temporal component as an organization can have strong financial health in the short term, but poor financial health in the longer term or vice versa.

Bowman (2011) describes a tripartite temporal framework for financial health based on the organizational objective and time period. The three time dimensions are the current period, the short-run and the long-run. A long-run objective is described as service expansion, a short-run objective as withstanding economic shock, and a current period object as focused on cash flows and paying bills on time (Bowman 2011). These objectives and timeframes correspond well with the financial health concepts found in the literature and this research builds on Bowman's framework by describing management strategies that are thus associated. Table 2

provides an overview of the distinction between the dimensions with respect to timeframes, objectives, measures, strategies and terminology used in research.

Table 2. Nonprofit Financial Health Strategies, Objectives and Measures

Dimen-sion	Time-frame	Strategy	Organizational Objectives	Financial Objectives	Measure	Dimensions in Research
Distress	Immediate term	Defend against distress	Manage sufficient cash flow, pay bills on time	Current services level	Solvency/ Liquidity - cash and quick ratios	Distress, bankruptcy
Capacity	Short term	Build structure	Withstand economic shock; manage risk	Manage risk through resource building and organizational structure	Equity ratio = assets – liabilities/total assets	Flexibility, capacity, vulnerability
Sustainability	Long term	Buffering, exploiting, maintain structure	Growth; service expansion; long-term survival	Expand activities; manage profitability; build profits	Return on assets = 100% x (total revenue – total expenses)/ total assets	Stability, sustainability

Financial distress is examined in the current or immediate time frame. An organization is in distress if it does not have sufficient liquidity and is at risk of potential failure or bankruptcy. Predicting distress is meaningful to all nonprofits, but particularly of interest to those organizations that operate with a current services level. For example, an organization may purposefully operate at a "current services" level and simply spends on services, whatever it receives from member contributions; a neighborhood housing association is an example of such an organization. For many small and new organizations, preventing financial distress may be the

primary concern. For example, a small, local food pantry may seek to maximize the total amount of food distributed to clients. Their main financial objective is to manage distress to keep their doors open and simply spend as much of their revenue on food as possible.

The second timeframe corresponds with the dimension of financial flexibility, which is another dimension used frequently in financial health research. Flexibility is closely related to capacity and vulnerability (Chang & Tuckman, 1991; Greenlee & Trussel, 2000; Hager, 2001; Keating, Fischer, Gordon, & Greenlee, 2005; Trussel, 2002). An organization has flexibility when it has enough excess capacity to engage in more risky activities and ability take on some level of risk. This runs counter to research findings that nonprofit organizations will always be risk averse (Kingma, 1993). Flexibility is about having the ability to leverage funds and selection of organizational activities (possible mission expansion). An organization has enough liquidity and solvency to pay its bills and yet has flexibility to consider risky revenue sources, risky investments or new activities. An organization can decide between additional service production and increased organizational capacity (to spend or save) and organizations move beyond "current services" level. Flexibility is built and maintained in the middle stage, over a longer time frame than distress.

Financial capacity and flexibility are complementary concepts; an organization with sufficient capacity has flexibility. Financial flexibility is present when an organization has the ability to respond to threats and opportunities from the environment (Hager, 2001; Hodge & Piccolo, 2005) and financial capacity allows an organization to take advantage of environmental changes and opportunities as well as protect against environmental threats (Bowman, 2011). The definition of capacity can also be conceptualized as organizational slack as is commonly discussed in the private sector (Cyert & March, 1963). Financial capacity is concerned with

short-term resiliency and ability to withstand the corrosive effects of inflation. Financial capacity

is necessary for nonprofit managers to seize opportunities and respond to threats in the near term.

Financial capacity allows an organization to take advantage of environmental changes and

opportunities as well as protect against environmental threats (Bowman, 2011). Scholars find

that concentrating revenue on a single source maximizes financial capacity (Ashley & Faulk,

2010; Chikoto & Neely, 2014), although this finding is not consistent with prior studies (Chang

& Tuckman, 1994). In addition, Foster and Fine (2007) find lower overhead costs associated

with concentrated funding and claim that lower overhead stimulates capacity growth. Financial

capacity is related to stability and vulnerability; organizations with sufficient capacity are stable

and therefore not vulnerable. A local dance organization may seek to attract and hire the most

talented dancers. Their main financial objective is to manage flexibility to provide salaries and

assure patrons and dancers their program will remain respectable and entertaining, regardless of

the profitability of the organization. When an organization successfully strategizes to build and

manage capacity and flexibility, it can move toward the longer term and the last, most difficult

dimension to manage, financial stability and sustainability.

Nonprofit managers seek financial stability and research assumes that reducing volatility

in revenue streams will produce stability (Carroll & Stater, 2009; Chang & Tuckman, 1991; Yan

et al., 2009). Research on financial stability focuses mostly on revenue structure, in terms of

diversification (Chang & Tuckman, 2010; Pfeffer & Salancik, 2003) or concentration (Foster &

Fine, 2007). One proposed way to achieve stability is to maximize revenue concentration.

Gronbjerg (1992) first observed that some nonprofits chose to rely on a few stable sources for

purposes of program and funding continuity. Other scholars however, find that the opposite is

true – financial stability is maximized through diversification of revenue sources (Chang &

Tuckman, 2010; Pfeffer & Salancik, 2003). This stream also analyzes the rewards and risks associated with various revenue strategies; for example, surplus revenue contributes to potential for organizational growth and a decrease in financial instability (Carroll & Stater, 2009; Chang & Tuckman, 1991; James, 1983; Miller, 2001, 2003). These studies all control for organizational size, but do not provide an explanation for the consistent finding that larger organizations are more stable.

Dependent Variable: Financial Sustainability

Nonprofit financial health is also evaluated in terms of sustainability. Sustainability is about having enough stability and confidence in the future of the organization to take on longer term planning and risks (Bowman, 2011; Zietlow, 2012). An organization has enough flexibility in their finances and has successful managed the risks in the shorter term, in addition to having sufficient liquidity and solvency. For this longer term dimension an organization strategizes around profitability and activities. As organizations have satisfied the immediate and current terms, they will begin to get larger and bureaucratize as they try to become more profitable and expand and diversify activities (Froelich, 1999). It is differentiated from financial flexibility or capacity in terms of scope and timing (larger scope and longer term). It is also where one would expect to see many strategic management activities. A hospital may seek to maximize medical research and development. Their main financial objective is to manage sustainability and maximize profitability in some service areas to provide funding in other areas or save for future programs.

Financial sustainability is concerned with longer-term survival of the organization and ability to provide more and/or better services. It is found in organizations that have had sufficient

capacity over the longer term and is measured as the rate of change of financial capacity, or overall asset growth, using the Return on Assets ratio (Bowman 2011), which is calculated as:

Return on assets = 100% x (*total revenue – total expenses*) / *total assets*

Nonprofit financial managers can strategically manage activities that influence revenues, expenses and assets in the longer term to build financial sustainability.

Nonprofit organizations' unique blend of public and private sector characteristics make public management theory (O'Toole and Meier, 1999) appropriate to help explain strategic financial management decisions. We know from public management theory that management's ability to create and maintain structure, buffer from environmental changes, and exploit opportunities will influence organizational outcomes. While some nonprofits are very unstructured, small and more vulnerable to their environment, others are highly structured and hierarchical, and are able to build reserves and buffer themselves from environmental fluctuations (Calabrese 2012). This leads to a proposition that the ability of an organization to create and maintain structure, buffer from the environment and exploit opportunities in the financial context determines whether an organization will be financially sustainable or not. Research generally assumes that nonprofit managers seek to maximize program services and output, however this suggests that to create sustainable financial health, nonprofits might engage in activities that may reduce program services in the shorter term. The next section describes the unique characteristics of nonprofit financial health and previous research.

Characteristics of Strategic Management of Nonprofit Financial Health

The financial condition of any organization is a product of revenue and expenditure choices and decisions. Theories from private sector corporate finance are often applied to nonprofit revenue decisions, as many sources of funding in the nonprofit sector resemble private sector finance, particularly for commercial-type organizations that can charge fees for goods or services. However, for many nonprofit organizations, private sector pricing models cannot sufficiently explain financial health of a nonprofit organization. For example, in those organizations that provide public goods or services, which a private sector firm cannot perform efficiently in a competitive market, organizations risk pricing services inefficiently or over providing services and putting the organization in an unsustainable financial position. Here, we can turn to public sector organizations for insight into financial health.

Public management theories are not often applied in the budgeting and finance context (Kioko et al., 2011), although there are many areas where it is logical to do so. Theories from public administration are more appropriately applied in instances where maximizing service levels is the assumed goal of the organization. Nonprofit organizations have aspects of financial health similar to the public sector, particularly when an organization serves as a provider of public goods or services. In other instances, like when an organization serves as and agent of government in delivering governmental goods and services, their financial health characteristics have even more in common with public sector agencies. This type of organization is referred to as an "ordinary nonprofit" (Bowman, 2011).

Previous research on nonprofit financial health is focused mostly on the seminal work of Chang and Tuckman (1991). A theory of financial vulnerability is proposed where an organization is financially vulnerable if the likely response to a financial shock is a reduction in services. Four financial ratios are proposed as the primary predictors of vulnerability 1)

inadequate equity balances, 2) highly concentrated revenue, 3) low administrative costs and 4) low operating margins. They argue that the presence of these four factors creates a financial situation of vulnerability and that converse of the four factors results in better financial health. Empirical tests of Tuckman-Chang find some support for four dimensions, offering improvements in model specification for testing and explore alternative definitions of vulnerability. Other empirical studies have confirmed that greater dependence on one source of revenue is associated with a higher vulnerability factor (Kingma, 1994). Chang and Tuckman (1991) find that average revenue and equity levels for at-risk and severely-at-risk organizations are lower, which is consistent with findings that larger organizations, when measured by total revenue or equity balance are healthier.

Other findings from tests of the Tuckman-Chang measures conclude the long-term debt to long-term assets ratio is higher for at-risk organizations and that vulnerable nonprofits have lower current ratio (less liquidity). Also, at-risk organizations have a higher percentage of revenue from program services than the average organization. The ratio of revenue to assets is larger for at-risk group but smaller for severely-at-risk. Trussel (2002) finds that more vulnerable charities have more debt, higher concentration of revenues, lower surplus margins, and that organizations are smaller. Hager (2001) finds that the Tuckman-Chang measures may help predict the closure of some nonprofit organizations, but do not have utility for all types of arts nonprofits.

Financial vulnerability is related to stability and sustainability; organizations with sufficient capacity are stable and therefore not vulnerable. The prior findings on vulnerability suggest strategies that nonprofit managers can use to increase sustainability, but unique characteristics of the nonprofit sector have not been examined for their influence on financial

health and sustainability. Public management theory provides a perspective to improve our understanding.

Despite similarities between the nonprofit and public sector organizations there are three factors that differentiate the nonprofit sector and suggest adaptations when applying public management theories to nonprofit organizations. First, the nonprofit sector is distinguished from the public sector by their use of volunteers. Volunteer hours provide a much-needed source of additional work hours and help nonprofits increase community support. Volunteer work hours are not reflected in financial statements, but may influence financial sustainability (Mook et al., 2007) as volunteer workers can provide substantial value to an organization that is not captured in financial statements or measures of financial sustainability. Studies estimate the size of the volunteer workforce is more than 50% of the size of the nonprofit workforce (Independent Sector 2002, Sokolowski and Salamon 1999, Mook 2007). In addition to the value of their work hours, volunteers contribute more donations than non-volunteers (Callen, 1994), which may indirectly boost financial health for organizations with a greater number of volunteers. In addition, nonprofits are subject to limitations on lobbying. Given the importance of government grants and contracts, lobbying efforts may affect financial sustainability. Finally, unlike the public sector, nonprofit organizations do not have the power of taxation and must rely on fees, grants or donations for revenues. This makes nonprofit revenues less predictable. Even so, nonprofit managers can act strategically despite being more susceptible to environmental fluctuations than public organizations. Theories developed in public administration and business literature can provide helpful guides to understanding strategies, but must be modified to accommodate these differences.

We know that management influences organizational performance through the building and maintenance of organizational structure, buffering from environmental influences and exploiting opportunities in the environment (O'Toole and Meier 1999). Therefore:

Financial sustainability = f (*maintain structure*, *exploit external, buffer shocks*) + *environment* + ε.

These decisions make up the core of strategic management for ordinary nonprofits as well (Bowman 2011); the unique characteristics of which differentiate the exploiting and buffering strategies from public organizations. The next section examines these unique characteristics of nonprofit organizations and types of strategic management activities that may lead to better financial sustainability.

Strategic Management of Nonprofit Financial Sustainability

Nonprofits exploit their environment by engaging in political activities such as lobbying (LeRoux and Goerdel 2009) and recruiting volunteers for public support and work hours. Buffering strategies include limiting revenues to less risky sources (Alexander et al 1999, Chikoto and Neely 2014; Kingma 1993), concentrating or diversifying revenue sources (Carroll and Stater 2009), and managing administrative efficiency (Tuckman and Chang 1991; Chikoto and Neely 2014).

Lobbying. Nonprofit managers exploit their environment by engaging in political activities like lobbying. Lobbying by nonprofit organizations is restricted by legal limits on the amount of expenditures an organization can commit to lobbying expenses, but more strategic organizations may use this exploitation strategy to their financial advantage while staying within the limits of the law. Research on nonprofit lobbying finds an association between larger

organizations and lobbying activities. Some research also finds that these larger, more politically active organizations receive larger amounts of government funding (Berry & Arons, 2003; Chaves, Stephens, & Galaskiewicz, 2004; Donaldson, 2007; Jenkins, 1987; Leech, 2006; LeRoux and Goerdel, 2009; Mosley, 2011; Salamon, 1995; Silverman & Patterson, 2010), which is a more stable and reliable source of revenue that contributes to better financial stability (Kingma, 1993). Berry and Arons (2003) also find in nonprofits receiving government funding that 26% of executive directors influence government officials through high levels of participation in policy or planning groups. Nonprofit managers may increase lobbying activities to ensure government funds continue to flow to their organization, whether directly or indirectly. Managers can use lobbying help increase revenue through promoting mission criticality and relevance to further justify government support. They may also actively engage in lobbying for additional funding or enabling requirements to support their programs. The mechanisms that an organization may use to actively lobby include grassroots lobbying which engages the community to mobilize on the organization's behalf and direct lobbying. Direct lobbying is undertaken by staff within the organization and involves direct communications with government officials about legislation that affects the organization and its programs. Therefore,

> *H1: Nonprofit managers increase political activities, such as grassroots or direct lobbying, to exploit the political environment and improve their financial health.*

Volunteers. Volunteers are an important resource for nonprofit organizations and are not incorporated into financial analysis of most nonprofit organizations. Additionally, most research on financial health does not examine volunteers as a resource or assess their relationship with

financial health. Volunteer labor may represent a valuable resource for nonprofit managers that they can leverage to improve long-term financial health. And, research suggests ways that nonprofit managers might approximate the value volunteer hours contribute as an organizational resource (Mook et al 2007) by developing a value added financial statement that accounts for contributions to the organization such as volunteer labor. We also know from research on nonprofit donors and donations that organizations may actively increase the number of volunteers to help build and increase their donor base (Callen, 1994). They may also recruit additional volunteers to help save on staffing costs. Therefore,

H2: Nonprofit managers will strategically manage the proportion of volunteers to paid-professional staff over time to improve financial health.

Riskiness of Revenue Sources. Nonprofit research also analyzes the rewards and risks associated with various revenue sources (Carroll & Stater, 2009; Kingma, 1993) and finds that larger organizations have higher percentage of government grants. These organizations are more successful at increasing revenue and are more willing to take on risk to do so, however organizations with higher rates of growth depend less on government sources. Revenue streams may be more or less predictable up to a given point and it may be that growth potential is less predictable. Alexander (2000) find that as nonprofits apply this risk aversion strategy and become more reliant on government grants, they become more like government bureaucracies in the sense of institutionalizing these pathways of funding. Therefore,

H3: Nonprofit managers manipulate the proportion of revenue from government grants to both increase growth and build financial sustainability.

Revenue Concentration or Diversification. Nonprofit managers that seek financial stability may choose to reduce volatility in revenue streams to produce stability (Carroll & Stater, 2009; Chang & Tuckman, 1991; Yan et al., 2009). Research on financial stability focuses mostly on revenue structure, in terms of diversification (Chang & Tuckman, 2010; Pfeffer & Salancik, 2003) or concentration (Foster & Fine, 2007). One proposed way to achieve stability is to maximize revenue concentration. Scholars find that concentrating revenue on a single source maximizes financial capacity (Ashley & Faulk, 2010; Chikoto & Neely, 2014). Gronbjerg (1992) first observed that some nonprofits chose to rely on a few stable sources for purposes of program and funding continuity. Other scholars however, find that the opposite is true – financial stability is maximized through diversification of revenue sources (Chang & Tuckman, 2010; Pfeffer & Salancik, 2003).

Revenue diversification may not be a result of financial strategy however. Rischer, Wislker and Young (2010) find that patterns of revenue combinations are found among particular service areas. Community buy-in and organizational legitimacy have also been offered as possible explanations for revenue diversification of an organization (Bielefeld, 1992; Galaskiewicz, 1990; Galaskiewicz & Bielefeld, 1998). Young (2006) offers the explanation that concentration and diversification of revenues may capture all of these through the function of the type of service the organization provides which will be controlled for in this model. Therefore,

H4: Nonprofit managers diversify revenue sources to improve their financial health.

Administrative Efficiency. Administrative efficiency is also explored in relation to financial health (Tuckman and Chang 1994; Chikoto and Neely 2014), and findings indicate that increasing spending on administration and fundraising contributes to increased financial capacity. Organizations that spend more on administration and funding are theorized have an easier time reducing payroll expenses in the shorter term. Foster and Fine (2007) find lower overhead costs are associated with better financial health and claim that lower overhead stimulates capacity growth. In contrast, more recent research finds that organizations that are underinvested in administration will be more poorly managed and will not have good financial health (Chikoto and Neely, 2014). Given the more recent studies, this leads to a suggestion that nonprofits managers might increase the size of their staff and hire more fundraisers to build financial health. Therefore,

H5: Nonprofit managers decrease administrative efficiency to build sustainable financial health.

This study analyzes how nonprofit managers strategically manage to create financial sustainability. The existing literature suffers from limitations that this research seeks to address. First, most literature that examines financial health of nonprofits applies private sector theories to the nonprofit context. Given the greater number of similarities to the public sector for ordinary nonprofits, application of public management theory is argued more appropriate. Second, prior research focusing on financial health is limited solely to financial characteristics, rather than management strategies. Finally, many studies focus on vulnerability rather than sustainability

that prioritizes an organizational objective of maintaining program services in the shorter term over longer-term expansion. The next section describes a model of financial sustainability based on the above hypotheses.

Explanatory Model of Nonprofit Financial Sustainability

This section first pulls together the preceding system of hypotheses into a testable, explanatory model of nonprofit financial sustainability. Secondly, data, variables, and methods are described and estimation results are reported and discussed. The variables used in the analysis are defined and statistical specification is explained.

Of primary concern is understanding the contributions of strategic management in explaining the financial sustainability of nonprofit organizations. Therefore, the dependent variable is measured as Bowman's ratio, as calculated from:

Return on assets = 100% x (*total revenue – total expenses*) / *total assets*

Within any one snapshot, this measure captures the rate of change of financial capacity, also described as the overall asset growth of an organization (Bowman 2011).

To test the contribution of strategic exploitation of the environment to increase financial sustainability, vis a vis political activities, an indicator of lobbying activity is included. Organizations are legally required to report lobbying expenditures and the literature cites concerns with the misreporting of organizations total expenditures on lobbying activities. It is recognized that organizations may not be aware of which activities qualify or staff may be unable to properly calculate cost allocations for lobbying activities. Some organizations may over report activities for fear of having their status revoked while others may be underreport

when knowledge of specific expenses is limited. Therefore, this is addressed by using a yes/no variable, given there is not a specific expectation about levels, nor would the results be reliable.

Of equal interest is the strategy of voluntary staffing choices in explaining financial sustainability. Inclusion of volunteers as a resource captures the degree to which a manager co-opts community resources to help support the organization. It is measured as a proportion of the total number of reported volunteers divided by the total number of compensated staff. Volunteer workers provide uncalculated value to nonprofit organizations (Mook et al 2007). Organizations may strategize by leveraging volunteer work hours to improve financial sustainability. Organizations that are highly reliant on volunteers to complete the organizations mission will report higher values of this variable while those using exclusively paid staff will have a value of zero. It is recognized that not all organizations may provide an accurate count of volunteers, which will caveat the interpretation of the estimates for this study.

The variable used to evaluate the influence of reliance on government grants is defined as the total value of government grants divided by the total amount of revenues. This variable captures how much the organization is using less risky resources to buffer their finances from potential revenue shocks since government grants are less susceptible to unpredictable shifts than donations or other revenue sources. Organizations that have reliable revenues from government grants will have a value of one, while those that have a value of zero have revenues from less reliable sources.

Revenue concentration is measured using the Herfindahl-Hirschman Index, as is customary in financial models (Chikoto and Neely 2014; Yan et al 2009). The three main revenue streams are contributions, government grants, and program revenue. Other scholars include investment income as a fourth revenue stream, which is not included here due to the

small number of organizations with investment income. A measure of one indicates extreme revenue concentration and values closer to one are more concentrated on singular revenues sources. On the other hand, a measure approaching zero indicates more revenue diversity. An organization buffers from potential revenue shocks by diversifying revenue sources.

To test the hypothesis that managers decrease administrative efficiency to build sustainable financial health (Hypothesis 5), a measure evaluating the organizations expenditures for administration is included. The variable is calculated as the proportion of total expenses that represents administrative costs:

Administrative efficiency = administrative expenses / total expenses

Organizations buffer their finances by decreasing their administrative expenses when experiencing a decline in their revenues and increasing their administrative expenses to maintain the buffer when experiencing an increase in revenues. Development offices often indicate that fundraising, grant writing, and other work associated with increasing revenues suffers from underinvestment in administrative staff. On the other hand, overinvestment is perceived as inefficient and donors may decrease their contributions for organizations with high administrative expenses. This suggests that there may be a minimum value at which financial sustainability is harmed when administrative efficiency is either too high or to low. Given the conflicting findings in research on administrative efficiency, the square of administrative efficiency is also included.

Control variables for organization size and age are included in the model. Organization size is defined here as the natural log of total assets (Ritchie and Kolodinsky 1994). Larger organizations should have a different ability to strategize within their organization as compared

with smaller organizations (due to, for example, economies of scale in operations). Previous

research on nonprofit financial health consistently finds that larger organizations have better

financial health, regardless of the measure used to gauge financial health (Bazzoli, Chan,

Shortell, & D'Aunno, 2000; Cleverley, 1989, 1995; Kirchner, Markowski, & Ford, 2007).

Organization age is also included as a control variable. Research indicates that older

organizations typically have greater financial stability and sustainability (Bowman 2011). These

organizations also tend to be more bureaucratized which could provide more structure and

stability. Organization age is also logged to normalize the data.

Based on the previous discussion, the following explanatory model of financial

sustainability can be stated:

$$\text{Financial sustainability} = \beta_1 \textit{Lobbying activity} + \beta_2 \textit{Proportion of volunteers} +$$
$$\beta_3 \textit{Reliance on government grants} + \beta_4 \textit{Revenue concentration} + \beta_5$$
$$\textit{Administrative efficiency} + \beta_6 \textit{Administrative efficiency}^{2} + \beta_7 \textit{Organization age}$$
$$+ \beta_8 \textit{Organization size} + \varepsilon$$

Data and Methods

Secondary data for analysis are obtained for 13,789 501(c)(3) nonprofit organizations for

tax year 2011 from the National Center for Charitable Statistics (NCCS). NCCS collects annual

tax return information from IRS Statistics of Income Form 990 for all nonprofits. The IRS

provides detailed information on organizational characteristics and financial information for a

weighted sample of nonprofit charitable organizations. The statistics of income data is used,

rather than the Core Data because it provides a larger number of financial data points, for

example, the information on lobbying. The Statistics of Income Data is also commonly used in

empirical studies for analyses of financial variables because of the higher level of detail provided in the data set (Calabrese 2012).

The sample is overrepresented by larger nonprofits, with sampling rates ranging from 1.24 percent for organizations reporting total assets less than $500,000 to 100 percent for organizations with total assets of $50,000,000 or more. This makes it less representative of the nonprofit sector as a whole, but provides for a more homogenous group and provides a greater representation of larger, more financially healthy organizations that are the focus of this study.

It is also important to note that scholars have questioned the validity and reliability of IRS data (Gronjerg, 2002; Reid & Krehley, 2001) but have concluded it is useable with proper filtering. The filters employed for this study are described below. Additionally, misreporting may occur with respect to the number of volunteers or lobbying activities, which could potentially skew the results of this study.

Previous research suggests practical issues to consider for this research to make the best use of the IRS 990 forms (Bowman, Tuckman, & Young, 2012) including exclusion of organizations that do not use accrual accounting, elimination of organizations that do not use the long form, elimination of organizations which do not follow the Financial Accounting Standards Board (FASB) standards on financial statements (specifically SFAS 117) and elimination of inactive organizations. Those organizations using the short form and those not following FASB standards are expected to manage their finances in a distinctly different manner, making them incomparable to those organizations included in the sample. Finally, research also suggests distinguishing between endowed organizations and those without endowments because their financial behavior may differ (Bowman et al., 2012). Some organizations also have missing data across many categories and have been removed from the analysis. Those organizations with

missing data do not otherwise report systemically different financial information in this analysis, and within the nonprofit literature this loss of cases is consistent (Calabrese, 2011, 2013; Fisman & Hubbard, 2003). These filters are applied to the data resulting in elimination of 6,780 organizations for a final total of 6,780 organizations.

Descriptive statistics are reported and ordinary least squares (OLS) regression estimation is used to test and analyze results from the specified model.

Estimation Results

Descriptive statistics for the sample of 6,780 organizations are presented in Table 3 below. The average return on assets is a rather modest 0.071, which is consistent with the reputation of ordinary nonprofits not having high rates of growth and profitability.

Table 3. Descriptive Statistics

	Mean	Std Deviation	Min	Max
Dependent Variables				
Return on Assets	0.071	0.112	0	4.259
Independent Variables				
Lobbying activity (yes/no)	0.347	0.476	0	1
Proportion of volunteers	15	242	0	12,500
Reliance on government grants	0.080	0.204	0	1
Revenue concentration	0.781	0.186	.333	1
Administrative efficiency	0.455	0.185	0	0.996
Organization age	56	42	1	367
Organization size	$244 million	$99 million	$2,083	$29 billion
N	6,780			

On average, organizations in the sample are less likely to report being active participants in lobbying activities. The average organization is also not highly reliant on volunteer labor with the average proportion of volunteers being 15. The range is rather high though, with a standard deviation of 242 and a maximum value of 12,500. Organizations in the sample are not highly reliant on government grants with the average value being a mere 0.080, although there are organizations that rely exclusively (100%) on government grants in the sample as well as others that receive no government grants (0%). Many organizations receive $0 in government grants demonstrating that some organizations either do not strategize through buffering with a more predictable revenue source or that managers do not actually view government grants as more predictable. However, many organizations in the sample rely heavily on government grants with highest value for government grant revenue was $4.4 billion (representing 80% of the organizations' revenue). Despite prior research findings that suggest diversification is an

effective buffering strategy, the organizations in the sample report high levels of revenue concentration; on average, concentration is 0.781 and a minimum of .333. Administrative efficiency is 0.455 on average with a standard deviation of 0.185. Finally, as expected given the use of the Statistics of Income data, the organizations in the sample are older and larger. The average age is 56 years and the average size is $244 million. The range for both size and age is wide with a minimum age of one year and maximum of 367. The minimum asset size is $2,083 and maximum size of $29 billion.

Table 4 presents findings from the regression model. The model is jointly significant, but the low degree of explanatory power points to the need for more specification overall, with an adjusted R^2 of 0.036, which is common for models seeking to explain an organizations finances (Keating et al., 2005; Parsons, 2007).

Table 4. Regression Results

	Financial ROA	Sustainability
Lobbying activity (yes/no)	0.096	(0.036)***
Proportion of volunteers	0.000	(0.000)
Reliance on government grants	0.823	(.079)
Revenue concentration	0.193	(.088) ***
Administrative efficiency	0.529	(.307)*
Administrative efficiency^2	-0.586	(0.354)*
Organization age (log age)	-0.251	(.019)***
Organization size (log assets)	-0.030	(.009)***
Constant	-2.10	(.171)***
N	6780	
R^2	0.036	
F	32.45	

Standard errors in parentheses
$^*p < 0.10$, $^{**}p < 0.01$, $^{***}p < 0.001$

Overall, the regression results indicate there is support for some degree of strategy employed by nonprofit organizations related to the return on assets, or financial sustainability. As expected, those organizations that actively exploit their environment through lobbying are associated with higher returns on assets. The influence is significant and substantive suggesting that organizations that strategize by incurring expenses for the purpose of influencing legislation are associated with higher returns on assets. The increased engagement with legislation through lobbying is associated with greater financial sustainability.

The influence of revenue concentration is even greater. The buffering strategy of concentrating revenue is associated with higher returns on assets. This strategy runs counter to popular advice from many private sector managers, that diversifying revenue sources leads to better financial health. This suggests that nonprofit revenues should be focused, rather than varied to build financial sustainability.

The level of significance for the buffering strategy of manipulating administrative efficiency makes interpretation of the coefficients questionable, although a 10% level of significance is recognized by some scholars and suggests a possible finding. Both the linear and squared-term are significant at the 10% level indicating that there is a peak point at which administrative efficiency no longer provides positive value to returns on assets.

Finally, organization size and age are both negatively related to financial sustainability, which is not consistent with findings in previous research. Larger organizations tend to have more formalized board practices (such as job descriptions) and tend to have larger boards (Cornforth and Simpson, 2002), which may contribute to more effective board practices. For the remaining variables in the analysis there does not appear to be statistically significant

relationships. This (and the low explanatory power of the overall model) suggests further improvement to the proposed model is necessary.

The results of this research are limited given the use of a single year of data, potential limitations of reporting for tax forms and the low explanatory power of the model. The exploitation strategy of using volunteers to boost financial sustainability produced results that may be linked to questions about the reliability of reporting in the IRS form-990 data. There are also potential concerns regarding accuracy of reporting to the IRS for lobbying expenditures, and future studies may examine the level of lobbying based on the amount of expenditures devoted to lobbying rather than merely participation in lobbying versus lack thereof. Future studies may expand analysis to multiple years of data to better capture changes in financial sustainability across time. Finally, the model may be expanded to increase explanatory power.

This research contributes to the literature on financial health by analyzing a strategic management perspective on financial sustainability. Previous research on nonprofit financial health consistently finds that larger organizations have better financial health, regardless of the measure used to gauge financial health (Bazzoli et al., 2000; Cleverley, 1989, 1995; Kirchner, Markowski, & Ford, 2007). Research on private sector organizations also indicates that larger organizations have better financial health and concludes that maximizing profitability and leveraging debt are the strategies employed by the organizations with the best financial health (E. Altman & Hotchkiss, 2006; E. I. Altman, 1968, 2000; Calandro Jr, 2007). This research provides a theoretical frame for examining management strategies for nonprofit organizations and sheds some light on the use of some strategies by those larger organizations with the purpose of generating better financial sustainability.

Article 3: Financial Sustainability of Membership Associations

Abstract

Actively managing an organizations' financial condition is a critical part of a successfully performing organization. Within nonprofit management, research has not examined determinants of financial health for membership organizations, even as these organizations are increasingly active in political advocacy and social discourse, have greater presence of internal, representational decision making, and produce more potentially excludable goods and services than other types of nonprofit organizations. This research examines the organizational characteristics and strategic management activities associated with better financial health in membership associations. This research examines financial and organizational information for nonprofit organizations from the U.S. National Center for Charitable Statistics from year 2011 to determine the management strategies associated with sustainable financial health. Findings indicate that maximizing program revenue and contributions, decreasing lobbying expenditures, and having more professional staff are all associated with better financial sustainability. Subsection 7, social clubs and being an education organization are also associated with a higher measure of financial sustainability. However, the explanatory power of the model is low, suggesting additional factors are yet to be incorporated when explaining sustainability.

Keywords: financial health, nonprofit management, strategic management, membership associations, financial sustainability

Introduction

The literature on membership associations' finances is largely based on analysis of rate setting for membership fees (Tschirhart, 2006), but does not include analysis of broader management of financial health. If poorly managed financial health contributes to declines in membership associations, then better understanding of available management strategies may help. This study fills this gap by identifying and then empirically examining a set of strategic management practices of membership organizations, as drawn from public management theory.

We also do not yet know the system of factors determining financial sustainability of membership organizations within nonprofit research. In fact, a full study of membership organizations' financial health has not been undertaken within the literature of nonprofit finance. Therefore, initial expectations about financial management for membership organizations are first built from the financial health literature in the general nonprofit sector. And secondly from the research on membership organizations that is only indirectly, or implicitly, related to financial health, but that does not specifically examine financial health, including examinations of resource dependencies (Knoke 1990), reviews of local resource densities (Hudson and Bielefeld 1997), and managing transaction costs (Schneiberg and Hollingsworth 1990). Finally, sustainable financial health has been defined as long-term financial stability within nonprofit research (Bowman 2011), where public management theory was applied for analysis of ordinary nonprofit financial sustainability (Bowman, 2011; Meier and O'Toole (2001); O'Toole and Meier (1999). This study extends these theoretical underpinnings to membership organizations. The proposition is examined concerning whether the ability of a nonprofit to create and maintain structure, buffer from the environment, and exploit opportunities will influence membership associations' financial health. However, the strategic management

techniques are different for membership organizations than ordinary nonprofits and therefore expectations regarding strategies will differ.

The financial management activities in which membership associations engage can include lobbying (exploiting), increasing unrelated business income (buffering), managing revenue structure (buffering), managing capital structure (buffering), and recruiting professional board members (buffering). These activities are analyzed using nonprofit tax data of a sample of 5,562 U.S. membership associations, as identified from the U.S. National Center for Charitable Statistics. Findings indicate that maximizing program revenue and contributions, decreasing lobbying expenditures, and having more professional staff are all associated with better financial sustainability. Subsection 7, social clubs, and being an education organization are also associated with a higher measure of financial sustainability. However, the explanatory power of the model is low suggesting there are additional factors that explain sustainability.

The study proceeds as follows: the next section describes membership associations in the broader nonprofit economy, followed by developing testable hypotheses which take into consideration the unique, comparative characteristics of membership organizations versus ordinary nonprofits. The third and fourth section integrates the strategic management activities available to membership organizations, based on their characteristics, and empirically sets up the test on the connection between those strategies and a key dependent variable of the concept of nonprofit financial sustainability. The fifth section describes the remaining system of variables used in the analysis, the estimation strategy, and further discusses data. Results are presented in the sixth section, and the final section discusses policy implications of the empirical findings, as well as limitations to the study.

Membership Associations in the Nonprofit Economy

A membership association is defined as "a formally organized named group, most of whose members – whether persons or organizations – are not financially recompensed for their participation" (Knoke 1986, p. 2). This definition includes a diverse group of nonprofit organization, including labor unions, social movement organizations, political parties, business and trade associations and sport and recreation organizations.

Membership associations contribute many benefits to society including political benefits, social and psychological benefits, and economic benefits. Membership associations contribute to the to democratic process by giving voice to special interests (Jenkins 2004). Unlike ordinary nonprofits, membership associations are not subject to limitations on lobbying activities and they are often active participants or leaders in political movements. Many organizations main function is to promote civil rights and liberties. Membership associations are active in regulating behavior of members directly and society indirectly. For example, there are a variety of sports and wellness oriented organizations that encourage and promote health and fitness of members. Another example is organizations that promote environmental awareness. Membership associations also provide value to the economy through developing and diffusing innovation (Newell and Swan 1995; Newell, Swan and Robertson 1999). And finally, these organization provide also provide social and psychological rewards to its members. Managing and improving the financial health of membership associations therefore has implications for social movements, societal and member behavior, and development of innovations.

Membership associations are very diverse and include most of the remaining subsections of the IRS code 501(c), a few of which are briefly described here demonstrate this diversity. Subsection 501(c)(4) represents civic leagues, social welfare organizations, and local

associations of employees. These organizations have a purpose of promoting social welfare for the benefit of the community. An example of a social welfare organization is The National Rifle Association (NRA). The NRA is among the oldest social welfare organizations in the U.S. and its purpose is to teach firearm safety and competency to the community. It has a variety of programs involving police, civilians, and youths and is also a highly active political lobbying group.

Subsection 501(c)(7) represents social and recreational clubs, which includes fraternities and their related organizations. These organizations must have a purpose related to recreation or pleasure and a substantial amount of its activities must be for this purpose. In addition, membership must be limited, rather than being generally open to the public. The Beta Psi House Corporation of Delta Gamma Fraternity is among these organizations. The fraternity established a separate housing corporation to provide financial and professional expertise to the fraternity's housing corporations. The fraternity itself is also a 501(c)(7) organization and this is an example of the many organizations that have multiple entities created that interact together. Each local chapter of the fraternity has a local housing corporation to manage the fraternities' property and there is a national housing corporation to assist the local housing corporations with management of their local chapter housing. The mission of the housing corporation is to provide expertise and assistance on budgeting, employment issues and financial or legal matters.

Subsection 501(c)(8) fraternal beneficiary societies and domestic fraternal societies represents Knights of Columbus. To qualify as this type of organization there must be a system of organizations that include local branches and a parent organization. Their purpose must be to provide for payment of sick, accident, life or other benefits for members and their dependents. The Knights of Columbus insurance program has over 2 million insurance contracts. It also has a

related charitable service organization that promotes Catholic education and public policy positions. These three descriptions demonstrate the wide variation of organizations that are categorized as membership associations.

Financial Sustainability of Membership Associations

This section discusses financial health in the nonprofit sector and appropriate measures for membership associations. Specific strategies for financial management are discussed after reviewing characteristics of associations and prior research findings.

Research on nonprofits identifies five categories of nonprofit organizations, based on economic benefits and financial structure: ordinary nonprofits, membership associations, endowed organizations, foundations and religious organizations. Previous work on financial stability and sustainability focuses mostly on ordinary nonprofits. Although Bowman does give us a general look at revenue structure and expenditures of membership associations (Bowman 2011), he does not delve into strategies or drivers of sustainability. Given the similarities of all five categories of nonprofits, sustainable financial health can be measured similarly.

Financial sustainability is concerned with the longer-term survival of the organization and ability to improve services. It can be measured using a common financial ratio, the Return on Assets (Bowman 2011):

$$ROA = 100\% \ x \ (Total \ Revenue - Total \ Expenses)/Total \ Assets$$

An alternative measure of financial sustainability that is used for research on hospitals provides a more complex measure of return on equity (Cleverly 1990). Return on equity is defined as the product of three financial indicators:

ROE = Operating Margin x Total Asset Turnover x 1 / Equity Financing

Where:

Operating margin = Net operating income / operating revenue

Total asset turnover = Operating revenue / assets

Equity financing = Fund balance / assets

Membership associations have a higher reliance on fees for revenues, as do hospitals; therefore a measure used in research on hospitals may be more appropriate for membership associations than measures used by other ordinary nonprofits. The disadvantage to using the alternative measure is that it is not as simple to calculate.

Membership associations are an important part of the economy and represent a large number of nonprofit organizations. They are economically important because they provide consumers with organizations to satisfy different consumer preferences that are not met by either the private or public sectors (Bowman 2011; Hansmann 1984). They are also considered important for their role in education and information sharing (Hopkins 2006). Finally, membership associations are important contributors to political life and discourse (Berry 1999, Jenkins 2006), are an important outlet for minority representation, and give a voice to groups with fewer resources (Leroux and Goerdel 2009). Finally, they are important to the economy as they provide important feedback to government for making improvements to social programs (Boris and Steurle, 1999).

As a significant part of the nonprofit community, their financial health is of interest. Research indicates that the number of membership associations declined from 1996 – 2006

(Tschirhart 2006) while the number of nonprofit organizations overall rose during this time

(Salamon 2012). Research has not examined the reasons for the decline, but financial health may

have been a factor. Financial health of membership associations is not conceptually different

than ordinary nonprofits, rather it is the strategies to manage financial health that may differ. The

next section explores unique characteristics of membership associations and introduces financial

management activities that may lead to better financial health.

Unique Characteristics of Membership Organizations

Much of what we know about nonprofit financial health is developed from research

focused on ordinary nonprofits. There are many similarities between the two types of nonprofits

that make theories and concepts of financial health generalizable. However, there are some

distinct differences between membership associations and ordinary nonprofits that suggest some

strategies for managing financial health will differ. This section explores the key differences

between the two types of nonprofits and what lessons we can learn from research on ordinary

nonprofits. In addition, a review of previous literature on membership association finances is

presented. Finally, a theoretical framework for examining management strategies in membership

associations is presented. The subsequent section will examine specific strategies for financial

sustainability.

There are four key differences between membership associations and ordinary nonprofits

characteristics including the economic roles, benefit structure, revenue patterns, and lobbying

restrictions. These differences are summarized in Table 1 along with a comparison of prior

research topics.

Table 1: Differences in Nonprofit Types

Organizational Characteristic	Ordinary Nonprofits	Membership Associations
Economic role	Provider of public goods and services; agent of government in provision of public goods	Contributor to political discourse; provider of private goods to members
Benefit structure	Benefits accrue to users, donors, society	Benefits accrue to fee paying members
Lobbying	Expenditures limited by IRS rules	No limitation on expenditures
Tax-deductibility of donations	Tax deductibility of donations	Donations or fees/dues not tax deductible
Primary revenue sources	Higher reliance on donations and grants	Higher reliance on fees
Previous research topics	Multiple financial concepts explored;	Largely descriptive for finances; fee setting; member attraction and retention

Nonprofit organizations serve three primary roles in the economy 1) independent, private suppliers of goods and services, 2) as agents of the government in delivering services aimed at meeting social needs and 3) as contributors to political life and discourse (Berry 1999). Ordinary nonprofits often serve mainly in the first two roles, while membership associations often focus on promotion of public values and serve in the third role. Membership associations are categorized as expressive organizations that promote values, affiliative organizations that promote social intercourse, and instrumental organizations that provide useful services to members (Mason, 1996).

A second factor that distinguishes the two types of nonprofits is the benefit structure. The goods that membership associations produce provide direct benefits to members that pay their fee or dues, while the good and services of ordinary nonprofits often benefit non-donors,

members of the general public regardless of membership or payment. Most of the benefits for donors are indirect. Membership associations produce goods and services that have excludable benefits, although some may argue that promoting values provides social benefit, the indirect benefits for the public are minimal. Fees or dues paid by members are more directly linked to the benefits derived from contributions and contributes to the next difference.

The third characteristic that separates membership association strategies from ordinary nonprofits is the primary revenue sources. Membership associations collect fees and dues from members and are less reliant on donor contributions for revenue.

The fourth and final important difference between ordinary nonprofits and membership associations that impacts financial management strategies available to organizations is lobbying rules and restrictions. Membership associations have no limits placed on lobbying expenditures and are able to spend more of their resources on this strategy. Membership associations accept the privilege of unlimited lobbying, but give up the ability to offer a tax deduction for donations. Tax deductibility is an important incentive for ordinary nonprofits that membership associations are not able to take advantage of and is another factor that shapes the difference in primary revenue sources.

Research on financial health of nonprofits often focuses on the shorter term analysis of financial vulnerability (Chang & Tuckman, 1991; Greenlee & Trussel, 2000; Hager, 2001; Hodge & Piccolo, 2005; Keating et al., 2005; Trussel, 2002; Tuckman & Chang, 1991) or financial capacity (Bowman, 2011; Calabrese, 2011; Chikoto & Neely, 2014). Research on financial sustainability has largely focused on describing measurement of financial sustainability (Bell, 2011; Bowman, 2011; Cleverley, 1989; Zietlow, 2012) rather than analyzing determinants of financial sustainability. However, this research suggests areas that managers can look for

strategies to build financial sustainability. Organizations that are less financially vulnerable have a lower ratio of debt to assets and more liquidity (Chang & Tuckman, 1991; Greenlee & Trussel, 2000; Trussel, 2002). This suggests that organizations with more assets are likely to be financially sustainable.

Most of what we know about membership association finances from previous research is descriptive (Bowman 2011). Bowman's description of financial capacity and sustainability draws from 2008 data from the ASAE/Center for Association Leadership (formerly the American Society of Association Executives). Membership associations have very little property and equipment and do not tend to have many restricted assets. This mostly affects their short-term financial health since their finances are flexible and can be easily spent down when they experience an economic downturn. Ordinary service providers often have many restricted assets and depending on the service sector can have many capital assets (e.g. hospitals).

Overall, membership associations' financial sustainability measures more closely to ordinary nonprofits indicating that their ability to strategize finances over the long term is similar. However, the diversity of purpose and type of membership associations makes generalizing theory difficult and research is needed to identify trends related to specific phenomena of relevance to all associations (Tschirhart, 2006). Given their similar financing structures and relationships with their operating environment this research is generalizable to all membership associations.

The similarities between ordinary nonprofits and membership associations lead to a proposition that the ability of an organization to create and maintain structure, buffer from the environment and exploit opportunities in the financial context determines whether an organization will be financially sustainable or not (Meier and O'Toole 1999). However, the

differences between the two types of nonprofits suggest that the buffering and exploitation strategies will not be the same. The next section explores the types of strategic management activities that lead to better financial health in membership associations.

Strategic Management

The financial management activities that a nonprofit engages in include lobbying (exploiting), increasing unrelated business income (buffering), managing revenue structure (buffering), managing capital structure (buffering), and recruiting professional board members (buffering).

Lobbying. Nonprofit managers exploit their environment by engaging in political activities like lobbying. Research on nonprofit lobbying finds an association between larger organizations and lobbying activities. Nonprofit managers may increase lobbying activities to improve public support for their organization. They may also actively engage in lobbying for additional funding or enabling- requirements to support their programs. Therefore,

> *H1: Nonprofit managers increase political activities, such as lobbying, to exploit the political environment and improve their financial health.*

Unrelated Business Income. Membership organizations that generate additional income for unrelated business may have more financially savvy management. They may be able to use this income to either improve their business or business practices or to leverage an advantage in their industry. Therefore,

H2: Nonprofit managers may leverage unrelated business income to increase growth and build financial sustainability.

Revenue Structure. Previous research indicates that nonprofit managers strategize using revenue structure (Carroll & Stater, 2009; Chang & Tuckman, 1991; Yan et al., 2009) for financial sustainability. One proposed way to increase financial health is to maximize revenue concentration. Scholars find that concentrating revenue on a single source maximizes financial capacity (Ashley & Faulk, 2010; Chikoto & Neely, 2014). Alternative research examining financial vulnerability find that diversification of revenue sources (Chang & Tuckman, 2010; Pfeffer & Salancik, 2003) leads to better financial health. However, these studies all analyze ordinary nonprofits and the difference in revenue patterns discussed previously suggests that membership associations may strategize by focusing on a particular revenue stream, rather than generally diversifying or concentrating. Therefore,

H3: Nonprofit managers may concentrate on a single revenue source to improve financial health.

Administrative Efficiency. Research on ordinary nonprofits indicates that administrative efficiency is related to financial sustainability. Prior findings also indicate that there are levels at which administrative efficiency may be either too high or too low in relation to financial sustainability. Given similar management structures of ordinary nonprofits and membership associations, it is expected that administrative efficiency will be associated with financial sustainability for membership associations as well. Therefore,

H4: Nonprofit managers may increase or decrease administrative costs to improve financial sustainability.

Staff Professionalism. Research suggests that more professional staff will be associated with better financial health (Simonsen, Robbins, & Helgerson, 2001). A more professional staff will make better strategic and financial management decisions for an organization in the long term and is more likely to be associated with improved financial sustainability.

Therefore,

H5: Nonprofit organizations with more professional staff will have higher rates of sustainable financial health.

Explanatory Model of Financial Sustainability

The strategy devised to test the preceding hypotheses is described fully in this section. The variables used in the analysis are first defined, followed by the statistical specification.

The first dependent variable is the return on assets ratio and is calculated as:

Return on assets (ROA) = 100% x (total revenue – total expenses) / total assets.

This measures the rate of change of financial capacity or overall asset growth of an organization (Bowman 2011). The second dependent variable is return on equity (Cleverly 1990) and is calculated as:

Return on equity (ROE) = Operating Margin x Total Asset Turnover x 1 / Equity

Financing

Where

Operating margin = Net operating income / operating revenue

Total asset turnover = Operating revenue / assets

Equity financing = Fund balance / assets

To test whether nonprofit managers use lobbying to exploit the environment and increase financial sustainability, total lobbying expenditures reported on the form 990 is included. Organizations are required to report lobbying expenditures. This variable may understate lobbying activities as some organization may underreport expenditures if knowledge of specific expenses is limited.

The unrelated business income variable captures the degree to which an organization leverages outside sources of revenue to increase organizational growth and build financial sustainability. It is reported on the form 990 as the total amount of income generated by unrelated business.

To test the hypothesis that revenue structure influences financial sustainability, the proportion of total revenue generated by each of the main sources is calculated. The main revenue streams are membership dues, program revenue, investment income, and contributions.

To test the hypothesis that administrative efficiency influences sustainable financial health, a measure evaluating the organizations expenditures for administration is included. The variable is calculated as the proportion of total expenses that represents administrative efficiency = administrative expenses / total expenses. Research on ordinary nonprofits indicates that there are levels at which administrative efficiency may be either too high or too low and the square of administrative efficiency is also included.

The variable used to measure staff professionalism is the number of staff earning greater than $100,000. Salary is often recognized as a measure of professionalism and therefore the presence of number of high paid staff serves as proxy in the absence of survey data or other information about staff members (Simonsen, Robbins & Helgersen 2001).

The IRS determines major categories of membership associations and the tax laws associated with each type of activity. The specific subsection of Section 501(c) of the Internal Revenue Code under which an organization is formed governs the tax treatment of member dues. A control variable for the ten major subsections is included. Additional control variables for organization size and age are included as well. Organization size is measured using the natural log of total assets (Ritchie and Kolodinsky 1994). Previous research on nonprofit performance consistently finds that larger organizations have better financial health (Bazzoli, Chan, Shortell, & D'Aunno, 2000; Cleverley, 1989, 1995; Kirchner, Markowski, & Ford, 2007). Organization age is included as a control variable as well. Organization age is associated with more structure and better financial health (Bowman 2011). Organization age is calculated using the year the organization was founded and is also logged to normalize the data.

Based on the previous discussion, the following regression model can be stated:

$$Financial\ sustainability = \beta_1 Lobbying\ expenditures + \beta_2 Unrelated\ business\ income + \beta_3 Revenue\ structure + \beta_4 Administrative\ efficiency + \beta_5 Administrative\ efficiency^{\wedge 2} + \beta_6 Board\ professionalism + \beta_7 Organization\ size + \beta_8 Organization\ age + \varepsilon$$

Data and Methods

Data for analysis are obtained for 6,018 501(c) nonprofit organizations for tax year 2011 from the National Center for Charitable Statistics (NCCS). NCCS collects annual tax return

information from IRS Statistics of Income Form 990 for all nonprofits. The IRS provides

detailed information on organizational characteristics and financial information for a weighted

sample of nonprofit charitable organizations. The statistics of income data is used, rather than the

Core Data because it provides a larger number of financial data points, for example, the

information on lobbying and unrelated business income. The sample is overrepresented by larger

nonprofits, with sampling rates ranging from 1.24 percent for organizations reporting total assets

less than $500,000 to 100 percent for organizations with total assets of $50,000,000 or more.

This makes it less representative of the nonprofit sector as a whole, but provides for a more

homogenous group and provides a greater representation of larger, more financially healthy

organizations that are the focus of this study. It is also important to note that scholars have

questioned the validity and reliability of IRS data (Gronjerg, 2002; Reid & Krehley, 2001) but

have concluded it is useable with proper filtering. Misreporting may occur with respect to the

expenditures for lobbying activities and could potentially skew the results of this study.

Previous research suggests practical issues to consider for this research to make the best

use of the IRS 990 forms including exclusion of organizations that do not use accrual accounting,

elimination of organizations that do not use the long form, elimination of organizations which do

not follow the Financial Accounting Standards Board standards on financial statements

(specifically SFAS 117) and elimination of inactive organizations. Finally, research also suggests

distinguishing between endowed organizations and those without endowments because their

financial behavior may differ (Bowman et al., 2012) therefore endowed organizations are not

included. Some organizations also have missing data and have been removed from the analysis.

These filters are applied to the data resulting in elimination of 456 organizations for a final total

of 5,562 organizations.

Descriptive statistics are reported and ordinary least squares (OLS) regression estimation is used to test and analyze results from the model specified above.

Estimation Results

Descriptive statistics for the full sample of 6,008 organizations are presented in Table 2 below. The average return on assets is 2.74 with a standard deviation of 29.25. This is much higher than the average return on assets of ordinary nonprofits from the same year (0.071). This is expected given the lower level of total assets for membership organizations. It is also consistent with the reputation of membership organizations having higher rates of profitability. Membership organizations are better able to price their products and are less reliant on public generosity, allowing them to have better financial sustainability than ordinary nonprofits. The

Table 2. Descriptive Statistics

	Mean	Std Deviation	Min	Max
Dependent Variables				
Return on Assets (ROA)	2.74	29.25	-587.95	1,430.18
Return on Equity (ROE)	0.069	6.59	-193.34	266.21
Independent Variables				
Lobbying expenditures	$37	$2,851	0	$221,009
Unrelated business income	$300,757	$2.8 million	-$2.4 million	$155 million
Revenue structure: Program revenue	0.69	0.39	-6.49	3.33
Revenue structure: Contributions	0.12	0.28	-1.31	2.34
Revenue structure: Investments	0.06	1.46	-97.31	9.51
Administrative efficiency	0.25	0.25	0	2.42
Staff professionalism	5.89	37.35	0	1,495
Organizations age	50	35	0	257
Organization size	$83 million	$1.2 billion	$633	$62 billion
N	5,562			

Return on equity average is more modest with a value of 0.069 and a standard deviation of 6.59 reflecting the additional factors included in this measure of sustainability.

On average, organizations in the sample do not spend a large amount on lobbying activities; the average value being only $37, but the range of expenditures is very high with a maximum amount of expenditures of $221,009 indicating that some organizations are highly political. Organizations report a large amount of unrelated business income with the average amount being $300,757 and a wide range reported with over $2 million in losses for a minimum and $155 million as a maximum. Organizations in the sample are highly reliant on program revenue, which is consistent with previous research (Bowman 2011) and an average value for program revenue structure of 69%. Membership dues are reported under the category of program revenues as well. There is much less reliance on contributions overall, with an average of only 12%. Administrative efficiency is rather high, indicating that organizations spend a large portion of revenue on administrative costs, 0.25 is much higher than most ordinary nonprofits and could be attributed to the overall smaller size of these organizations. Staff professionalism is also rather low, with an average of only 6 staff earning over $100k and a standard deviation of 37. Organizations are an average of 50 years old with a standard deviation of 35.

Table 3 demonstrates that variables in the model have low levels of correlation.

Table 3. Correlation Table

	ROA	ROE	Lob.	UBI	RS: Prog	RS: Cont	RS: Inv	Adm Eff.	Staff Prof	Org Size
ROA	1.00									
ROE	0.00	1.00								
Lobbying expenditures	-0.00	-0.00	1.00							
Unrelated business income	0.00	0.00	0.00	1.00						
Revenue structure: Program revenue	0.03	0.01	-0.02	-0.01	1.00					
Revenue structure: Contribution	-0.04	0.00	0.04	-0.02	-0.61	1.00				
Revenue structure: Investments	-0.00	-0.01	-0.00	0.00	-0.05	0.01	1.00			
Administrative efficiency	0.01	-0.01	-0.01	0.02	-0.07	0.10	-0.03	1.00		
Staff professionalism	-0.00	-0.00	-0.00	0.29	0.04	-0.02	-0.00	0.09	1.00	
Organization size	0.07	-0.02	-0.02	0.13	0.22	-0.31	0.01	-0.14	0.19	1.00
Organization age	0.02	-0.01	-0.02	0.04	-0.03	0.04	-0.01	0.36	0.09	-0.01

Table 4 presents findings from the regression models. The ROA model is jointly significant, but the low degree of explanatory power points to the need for more specification overall, with an adjusted R^2 of 0.039. This low level of explanatory power is common in models analyzing organizational finances (Calabrese, 2011; Keating & Frumkin, 2003; Parsons, 2007). The adjusted R^2 for the ROE model is also low at 0.026.

Table 4. Regression Results.

	Financial Sustainability ROA	Financial Sustainability ROE
Lobbying expenditures	-0.000 (0.000)[*]	-0.000 (0.000)[**]
Unrelated business income	0.000 (0.000)[***]	0.000 (0.000)[***]
Revenue structure: Program revenue	0.027 (0.003)[***]	0.000 (0.000)[***]
Revenue structure: Contributions	0.034 (0.004)[***]	0.000 (0.000)[***]
Revenue structure: Investments	-0.000 (0.000)	-0.000 (0.000)
Administrative efficiency	0.010 (0.010)	0.000 (0.000)
Administrative efficiency^2	0.002 (0.012)	0.000 (0.000)
Staff professionalism	-0.000 (0.000)[***]	-0.000 (0.000)[***]
Organization age+	-0.000 (0.000)[***]	-0.000 (0.000)[***]
Organization size+	.003 (0.000)[***]	0.000 (0.000)
Subsection 7 (social clubs)	-0.015 (0.004)[***]	-0.000 (0.000)[***]
Education organizations	-0.019 (0.010)[**]	0.000 (0.000)
Constant	1.745 (0.0135)[***]	5.298 (0.000)[***]
N	5,562	5,562
R^2	0.039	0.026
F	10.51	6.24

Standard errors in parentheses
[*] $p < 0.10$, [**] $p < 0.01$, [***] $p < 0.001$
Results for individual subsections and major categories were insignificant except for subsection 7 (social clubs) and education organizations, which is presented above.

Revenue structure does appear to be related to ROA with higher proportions of revenue from program revenue being associated with higher ROA. Many of the variables in the model are found to be significant, but the magnitude of the effect is so low as to be of little or no consequence. Unrelated business income and staff professionalism are all related, but a one dollar increase or one staff person increase has so little effect on the ROA that an organization would have to spend significant amounts to effect sustainability. The same applies to lobbying

expenditures, the relationship between ROA and lobbying expenditures, which is found to be negative indicates that changes in lobbying expenditures don't have a large effect on ROA. Control variables of age and size are both significant, but are also so small that they have very little relationship.

In contrast to ordinary nonprofits, administrative efficiency is not significant in either model. This indicates that membership organizations do not strategically manage their administrative efficiency and may be attributed to the fact that they are less reliant on contributions. Administrative efficiency is often discussed in relation to donors' willingness to give. Ordinary nonprofits may be motivated to manipulate their administrative costs in an effort to maximize their revenues from contributions. Membership associations may be less motivated to act similarly given their higher reliance on program service revenues, which includes membership dues.

For the remaining variables in the analysis there does not appear to be a statistically significant relationship. This, and the low explanatory power of the overall model suggest further improvement to the proposed model is necessary. It may be particularly useful to learn from managers at membership associations which measure of financial sustainability would be more practically helpful.

Many questions are thus raised by the findings of this research. This research is limited by the use of cross sectional data and can be improved by expanding analysis to multiple years. In particular, the choice to examine the year 2011, a time period when arguably all nonprofit organizations were recovering from the effects of the Great Recession, may limit the findings Further research using available panel data may help answer questions about causality and endogeneity, as well. The use of IRS financial data also limits findings to organizations with

more than $25,000 in assets. Finally, surveys may reveal more information about those strategies that are not captured in tax data would also contribute to this body of research.

Knoke (1990) stated that research on membership associations is lacking in development. "Put bluntly, association research remains a largely unintegrated set of disparate findings, in dire need of a compelling theory to force greater coherence upon the enterprise. Without a common agreement about the central concepts, problems, explanations, and analytical tools, students of associations and interest groups seem destined to leaver their subject in scientific immaturity." Tschirhart's review of research on associations from 2006 states that this sentiment is still largely true and was similarly expressed as long ago as 1959 (Gordon and Babchuk 1959). This study provides advancement of research on associations by clarifying those concepts that are shared with ordinary nonprofits and specifying the strategies that make managing them unique.

Final Discussion

Given the conclusions and limitations of the preceding three articles, there are a number of items worthy of further examination. This final discussion includes major theoretical and empirical issues to be considered for future work on nonprofit financial health. The first two sections discuss the selection of measures for distress and sustainability respectively. The third section provides suggestions for further improvement to the empirical model for strategic management of financial sustainability. The fourth and final section provides a discussion of the importance of membership associations in the nonprofit economy.

Measuring Financial Distress

An important consideration that should be noted for any future financial distress research is the active debate around the use of the quick ratio, current ratio and days of cash on hand for measuring liquidity and distress. The research presented here adopts a definition of distress based on acceptance of the premise that the three ratios are appropriate indicators of financial distress. This assumption is made because in practice, nonprofit managers use the traditional ratios. Business management literature has additional definitions of distress and debates the usefulness of the measures used in this study (Chen & Shimerda, 1981). Models to predict distress typically use bankruptcy records to build empirical models for prediction (E. Altman & Hotchkiss, 2006; Beaver, 1966; Edmister, 1972) and even within this literature, scholars question whether these ratios are useful (Beaver, 1966, 1968). The current ratio was historically introduced to evaluate the credit worthiness of private sector firms (Beaver 1966) and since its introduction, more sophisticated measures have been suggested such as including hard contracts in addition to assets and liabilities (John, 1993). Future research might incorporate some of these measures in addition to the financial ratios used here. Additionally, research suggests that management

matters (Kioko et al., 2011) and any future research should include variables to evaluate its impact as well. For example, the professionalization of staff and board members, the representational structure of decisionmaking, and the import and use of social capital for organizational means, are but a few that could be examined in future research.

Measuring Financial Sustainability

Secondly, this study uses Bowman's (2011) measure of financial sustainability. However, alternative measures for sustainability should be discussed and explored for future research on the topic. This section discusses, in particular, the merits of the Return on Assets as a measure of sustainability and presents the alternative measure using unrestricted net assets.

The Return on Assets (ROA) is described as capturing the rate of net change in financial capacity (Bowman 2011, p. 81). This definition presents financial sustainability as a flow concept, which is reflected in the income statements of organizations. However, some researchers would argue that sustainability should be represented as a stock concept, which is reflected in the balance sheet, rather than the income statement. In practice, nonprofit managers often focus on financial strategies to increase the annual flow of income and using the ROA as a measure is consistent with this. However, financial sustainability should encompass both the stock and the flow of finances within an organization and using only the ROA, focus on strategies related to the stock of assets is limited. To resolve this problem, an alternative measure for financial sustainability that should be considered for future testing is unrestricted net assets divided by total assets. Unrestricted net assets represent one of the best resources for nonprofit organizations because they allow nonprofit managers the widest selection of choices for expenditures to leverage programs and fund expansions, offer protection against vulnerability or

creating additional programs for an organization. There are some problems with this idea, however. First, donors or the general public may hold a negative view of an organization that holds large balances of unrestricted net assets. An organization that chooses to hold unrestricted net assets, rather than spend them for the purposes of the organization's mission, may be perceived as acting against the mission. This may be important, particularly for organizations that are highly reliant on donations for revenue, but also for any organization with a highly public profile, and may ultimately decrease financial sustainability. And secondly, unrestricted net assets may not be an appropriate measure for all nonprofit organizations, particularly those that operate using a majority of restricted assets.

Improvements for Explanatory Model of Financial Sustainability for Ordinary Nonprofits

Thirdly, this section provides suggestions for improving the empirical model for strategic management of financial sustainability. Given the preceding description of potential problems with the ROA, the use of cross sectional data is problematic and future research should include additional years of data. A key reason that cross sectional data are problematic is that findings may be inaccurate due to circumstances such as a big capital campaign or windfall year for an organization that might otherwise have a historically low ROA. Alternatively, an organization might have an unusual single year loss that may also result in inaccurate findings. Potential time ranges include a three year average, which is normal in financial vulnerability studies (Tuckman and Chang 1994), at least five years to acknowledge the longer timeframe of sustainability, or as many years of data might be available. Alternatively, future studies might evaluate the change in ROA as the dependent variable.

This research examines a sample of nonprofit organizations with a wide variety of missions across the nation, and assumes that financial sustainability, being a long term phenomena, does not meaningfully vary across industries. Future research should test this assumption primarily because financial sustainability may vary significantly across industries that may be influenced by the type of good and services produced or the economic factors related to a particular industry. One estimation strategy is to use fixed effects by industry. The National Taxonomy of Exempt Entities (NTEE) provides a classification system that can be used to test how the primary purpose of an organization is related to financial sustainability. This may be done using the five major subsectors, which are arts, culture, and humanities, education, health, human services, and other or the ten major groups. Alternatively, separate models across classification categories could be estimated and then chow tests applied to assess potential differences among categories.

Memberships Associations in the Nonprofit Economy

Finally, this section further discusses the role of membership associations in the nonprofit economy and the value they bring to broader national economy. Membership associations are created to provide social benefits to members that are not otherwise available in the regular economy or through public sector organizations. The many types of membership associations are specified in federal tax law, which demonstrates that lawmakers value the types of services that membership associations provide so greatly that they should receive the benefits of tax exempt status and sometimes tax deductibility of donations.

Recently, the number of membership associations has declined. Fewer membership associations may impact the broader development of social communities. Organizations such as

fraternities and sororities help young people establish networks that bring personal and professional connections and lifelong relationships that enrich lives and communities. Organizations such as the NRA provide skills and resources for members. And service organizations like the Knights of Columbus regulate societal and member behavior. Unions are another example of membership associations that provide important benefits that affect the broader economy through their bargaining power of employees and the protections that they provide to many active workers in communities. These organizations have far reaching impacts on social movements and society and member behavior and having financial sustainability is important to their success and longevity in the sector.

Additionally, improvements for testing the model include two items in particular, unrelated business income and organization size, scaled as they are, leads to difficulty interpreting the coefficients due to the large number of zeros.

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