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## A Systems Approach to Revenue Fluctuation in Nonprofit Human Service Organizations

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## ABSTRACT

Nonprofit Human Services Organizations (NPO) are normally considered to do all they can to work toward providing clients with optimal services (Bowman, 2011). What has not been considered is the possibility that NPOs sometimes allocate more revenue toward accumulating profit than toward generating services. This study used IRS 990 Forms of 150 private nonprofits from 2009 to 2010 to investigate whether NPOs did this at the peak of the recent recession, a time when there was a strong need for NPOs to increase their level of services. Results showed revenue increased 56%, services increased 1.4%, profit increased 43%, operating margin decreased -15%, and equity balance increased 24%. This study raised issues of social justice in how some NPOs manage their finances, as well as augmenting social workers' understanding of how NPOs can successfully serve their communities.

A Systems Approach to Revenue Fluctuation in Nonprofit Human Service Organizations

A Thesis

Presented to

The Faculty of the Graduate School (of Social Work)

Abilene Christian University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science of Social Work

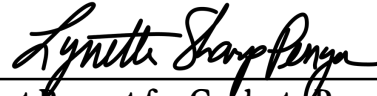
By

Joshua James Hunter

May 2017

This thesis, directed and approved by the candidate's committee, has been accepted by the Graduate Council of Abilene Christian University in partial fulfillment of the requirements for the degree

Master of Science in Social Work



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Assistant Provost for Graduate Programs

Date

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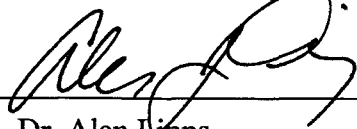
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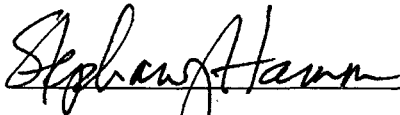
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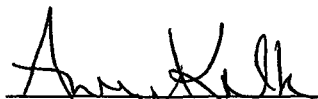
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Dr. Alan Lipps




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Dr. Stephanie Hamm



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Amy Kalb, LMSW



This writing is mainly dedicated to my dad, without whose unconditional love and support I most likely would have succumbed to atheistic philosophies; but also to Friedrich Nietzsche, whose atheistic philosophy on master morality continually encourages me to be a loving and caring person.

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## CHAPTER I

### INTRODUCTION

Nonprofit Human Services Organizations, or NPOs, were created with the intention of helping alleviate some of society's more complex social problems (i.e. homelessness, mental health issues, discrimination, poverty, disease, sexism, social justice etc.) (Blalack, 2016). In order to do this, NPOs must hire and secure funding for a wide-range of service professionals to include licensed practitioners, janitors, administrators, and sometimes lawyers and doctors (Sontag-Padilla, Staplefoote, & Morganti, 2012). These service professionals work to provide clients with the help and services they need in order to live a more meaningful life; however, if an NPO realizes the environment they operate in is financially unstable, they may decide that in order to survive they need to allocate more of their revenue toward increasing their profit margin than toward increasing their service offerings. Bowman (2011) argued NPOs in these tough financial situations will nevertheless do all they can to provide clients the needed amount of services, "The data tell a familiar story: ordinary nonprofits stretching their resources to the limit and exposing themselves to long-and short-term risks to serve their clients" (p. 48). It is expected NPOs in tough financial situations will still focus more on generating services than accumulating profit.

Bowman's (2011) argument may not be true if an NPO realizes their profit margin needs to be increased to prepare for future financial difficulties. Other researchers

(Calabrese, 2010; Ramirez, 2011) argued NPOs tend to avoid putting themselves in a worse financial situation by preserving, or increasing, their profit margin.

Little research has been found on the reasons NPOs might choose to increase their profit margin more than maintaining the same level of services (Francois, 2015). A possible explanation for this lack of interest may be such research can be viewed as painting a very dark picture of how NPOs manage their finances. The choice to make profit in financially difficult times can be easily interpreted as NPOs' intend to make or keep their money over helping clients in need of services (Calabrese, 2012). Even though NPOs may sometimes have to do this to survive (Calabrese, 2012), because of the likelihood to be misconstrued as selfish behavior in NPOs, researchers may choose not to ask why NPOs might choose to keep profit, less the researchers become labeled as giving NPOs a bad name. It is very likely that in order to avoid possible negative publicity (i.e. being categorized as an agitator) researchers have been more prone to study topics such as "Revenue Diversification in Nonprofit Organizations: Does it Lead to Financial Stability?" (Carroll & Stater, 2008, p. 947); or "Which Nonprofit Gets More Government Funding?" (Lu, 2015, p. 297). This may be why there are significantly more journal articles demonstrating how efficient and effective NPOs are with their money, rather than journal articles discussing some of the more troubling things NPOs need to do in order to continue providing clients with quality services.

A search of Abilene Christian University's (ACU) library database revealed 48,247 related journal articles on financial effectiveness in NPOs and 3,977 related journal articles on service reduction and cash holding in NPOs.

Examining what some of their more troubling things are, however, is imperative to conduct quality research, and it may clear up some of the misconceptions researchers may have on how NPOs manage their finances. For example, it seems to be characteristic of researchers to think NPOs should accumulate profit instead of generate more services, so they can at least offer some services in the future, as opposed to risking being shut down and offering no services. Instead of ruling out this possibility, examining this possibility may augment researchers' knowledge on what NPOs need to do to survive in tough financial situations. The result may enhance researchers' ability to assist NPOs in these situations. What seems like a dark picture of how NPOs manage their finances, then, may turn out to be not so dark after all. To provide a philosophical analogy, sometimes what others believe is evil or immoral may turn out to be good and vice-versa (Nietzsche, trans. 1982).

### **Removing Profit Accumulation in NPOs from the Shadows**

Tuckman and Chang (1994) suggested the small number of journal articles on profit accumulation in NPOs indicated researchers are more interested in verifying NPOs fulfil their mission on low budgets. At least this seems to be the reason why few research articles have been published over the years regarding the decision to accumulate profit in NPOs (Calabrese, 2012). One of the few times this was ever discussed, in fact, was in 1994 by Tuckman and Chang, who identified five critical reasons why nonprofit managers may choose to hold on to and accumulate a financial surplus; the most primary of which, arguably, was to "... hedge against risk and uncertainty" (p. 132). Consistent with future research findings, these notable researchers additionally pointed out the nonprofit sector's equity steadily grew "... from \$101 billion in 1975 to \$191 billion in

1983,” or an increase of \$5 billion after adjusting for inflation (p. 130). In support of this, it does not take much effort in searching through government databases to notice that over time NPOs have typically held on to and generated more and more profit, totaling “... 5.4 percent of the country’s gross domestic product (GDP)” by 2012 (McKeever & Pettijohn, 2014, p. 1). For reasons not yet clear, though, a search from Google Scholar found only 132 articles citing Tuckman and Chang’s 1994 article in the past 23 years. The majority of studies regarding profit accumulation in NPOs may only exist in the shadows of scholarly research.

It wasn’t until 2011 (17 years after Tuckman and Chang’s 1994 research) that additional studies were conducted on the topic of why NPOs may choose to accumulate profit. Calabrese (2012) examined some of the reasons why NPOs might do this, making a similar conclusion as Tuckman and Chang (1994) that, generally speaking, “... nonprofits target profits and seek their accumulation over time” to avoid making themselves vulnerable to future financial depreciation(s) (p. 300). However, Calabrese did not examine whether they would sometimes allocate more revenue toward profit than services to avoid this situation. Ramirez (2011), who only a year prior to Calabrese (2012) examined the determinants and implications of cash holding in NPOs, also did not. Instead, these two researchers pointed out that contrary to popular belief (Tuckman & Chang, 1991; Greenlee & Trussel, 2000), it is appropriate for NPOs to sometimes act more in accordance with their for-profit counter-parts by accumulating larger and larger profit margins. They inadvertently supported Tuckman and Chang’s conclusion that “[S]ociety would be well served if nonprofit finances were removed from the shadows” (p. 133). Doing so should give researchers and educators better insight into the decisions

NPOs make to keep and build their profit margin and stay financially afloat (Tuckman & Chang). This will give researchers a better understanding of the obstacles NPOs face when creating profit margins.

### **The Problem of Accumulating Profit in NPOs**

Typically, it has been thought that any extra finances NPOs have accumulated should be used toward supporting services and that NPOs that hold onto these profits are in violation of their 501(C) (3) tax exemption status (Calabrese, 2012). This is simply not true. While avoiding profit accumulation by spending excess revenue on services paints an ideal picture of how NPOs might operate, NPOs that do not save any finances are ill-prepared to weather future financial storms (Mitchell, 2015). This leaves NPOs in a very awkward position. On the one hand, NPOs, such as the Clinton Foundation, have been heavily scrutinized for the amount of profit they have accumulated, which as of 2014 was \$371,958,668 (Clinton Foundation, n.d.); however, on the other hand, most small NPOs could not survive a significant loss in funding (Mitchell). The good news is charity watchdogs, such as Charity Navigator (2016), understandably permit NPOs to maintain a certain level of finances in their profit margin without receiving penalty (e.g., NPOs with too much money in their profit margin receive a lower rating and, as a result, may receive less financial support from donors) (Calabrese, n.d.). Research, however, supports the idea that donors understand NPOs need to accumulate profit in case their revenue begins to decrease (Calabrese, n.d.; Charles & Kim, 2016; Ramirez, 2011).

Therefore, the problem with accumulating profit lies in determining the point at which an NPO's finances are in excess of the amount needed to maintain operational costs (i.e., service expenses) should revenue suddenly begin depreciating (Calabrese,



2012; Tuckman & Chang, 1991). The easiest way of making this determination of excess profit is by subtracting total liabilities from total assets (which equals total net assets) and then seeing if the resulting number is sufficient to cover monthly, or even yearly, expenses (Bowman, 2011; Calabrese, 2012). The total net assets resulting from this equation is the money available in liquid revenue (or cash on hand), hard assets (land, power, and equipment), and investments that NPOs can use to pay their bills should their revenue decrease (Bowman, 2011). NPOs must be careful not to let their liabilities and expenses exceed their total revenue, as debt will become excessive and, potentially, thwart the NPO's ability to fulfil its mission (Bowman, 2011).

### **How NPOs Accumulate Profit**

To help avoid this situation, the U.S. Better Business Bureau's (BBB) Wise Giving Alliance guidelines on financial management in NPOs stated NPOs can accumulate profit but that this profit "...*should not* [emphasis added] be more than three times the size of the past year's expenses or three times the size of the current year's budget, whichever is higher" (Give.org, n.d.). This is very interesting. The BBB could have easily placed limitations on the amount of profit NPOs may generate, but they instead qualified their statement with the words "should not," thereby indicating there is no legal penalty or limit to the amount of profit NPOs can accumulate (Calabrese, 2012; Give.org). Drawing from research conducted in 1980 by Hansmann (as cited in Calabrese, 2012), Calabrese (2012) additionally pointed out the IRS made no specifications on how long NPOs may retain any such profit; rather, because of the IRS's "nondistribution constraint," Calabrese wrote no profit can be distributed "...to officers, directors, or management" (p. 301). Though the IRS's nondistribution constraint implies

profit will be kept in the NPO to prevent members from syphoning money out of the budget (Calabrese, 2012), the IRS did not stipulate how much profit a NPO can accumulate. Instead of discouraging NPOs from making profit, the BBB and IRS permit NPOs to grow as large (if not larger) as their for-profit counter-parts, so long as they abide by certain regulations (Calabrese, 2012).

But there are very few regulations the BBB (Give.org, n.d), the IRS (n.d.), and Charity Navigator (2016) require NPOs to abide by if they are to keep their 501(c) (3) status. These regulation are 1) NPOs must not lobby or give to “private shareholder[s] or individual[s]” (IRS, n.d.); 2) they must “Spend at least 65% of [their] total expenses on program activities” (Give.org, n.d.); and 3) they must “Spend no more than 35% of related contributions on fund raising” (Give.org, n.d.). What these regulations boil down to, however, is NPOs that generate profit that is not in excess of three years-worth of spending or budget, and spend at least 65% on services and “no more than 35%... on fundraising” (Give.org, n.d.) will never be in violation of accumulating profit (Calabrese, 2012). Since NPOs typically meet these regulations by spending 90% of their revenue on service expenses, they often leave the remaining 10% to fund administration, fundraising events, and profit accumulation (Charity Navigator, 2016). Accordingly, if their revenue is \$300,000, only \$30,000 (10% of \$300,000) is left over to support the administrator(s) and their fundraising efforts.

It should be noted that while saving only 10% of their revenue seems spectacularly low, it is only low in NPOs that make less than \$500,000. These organizations are able to generate \$50,000 to \$100,000 toward their administrative and fundraising fees without being in violation of any authoritative regulation. What is more,

if an NPO's annual revenue is over \$200 million (which is not an uncommon number to find in the nonprofit sector) they will save about \$20 million without being in violation of IRS, BBB, or Give.org regulations (Calabrese, 2012). However, if it costs such NPOs less than \$20 million to pay administrative and fundraising expenses, they will have no choice but to allocate whatever profit is left over into their profit margin. As long as this allocated amount does not exceed three year's worth of revenue or budget needed to pay operational costs, such NPOs will continually receive an A or A- rating from charity watchdogs (Give.org).

It is in this way that many of the larger NPOs have been able to continually add to their overall amount of profit (as indicated they would by Calabrese [2012; 2013] and Ramirez (2011)) by generating enough profit to grow, some in excess of \$100 million. There is nothing inherently wrong with NPOs growing to such a large size. The problem these NPOs face, rather, is justifying the amount of profit they have accumulated (Calabrese, 2012). It turns out a good way of doing this is by increasing the amount of money being put into overall expenses (i.e., paying higher salaries and adding additional services), that way it will take a larger amount of money to pay for three year's worth of operational costs (Give.org, n.d.). All NPOs have to do to generate profit without violating their 501(c) 3 status is to save three times the amount of money then need to provide services each year, which is arguably how the nonprofit sector grew to the size it has (\$2.99 trillion by 2012) without having to drain their financial reserves (Ramirez, 2011).

### **The Situation of Most NPOs**

Most NPOs can only dream of making enough revenue to sufficiently pay for their operations and expenses, let alone generate surplus profit (Bowman, 2011). A considerable amount of literature suggests most NPOs do not even keep enough profit to cover their basic expenses for the minimum three month requirement (Bowman, 2011), but this does not mean they will spend what profit they have on services if their source of revenue suddenly becomes unstable (Calabrese, 2012a; Greenlee & Trussel, 2000; Thomas & Trafford, 2012). In fact, some evidence exists that suggests NPOs may have allocated more revenue toward their profit margin than their services to continue with their operations. Such NPOs would most likely have over \$500,000 in assets (Courtney Vletas, personal communication, November 18, 2016). The time period in which it seems likely that some of them may have done this was at the peak of the Great Recession from 2009 to 2010. It was during this time that NPOs faced less in donor support and government funding, yet somehow the entire sector grew, adding additional NPOs at a time when, arguably, it would be harder to do so (Brown, McKeever, Dietz, Koulish, & Pollak, 2013).

### **Evidence from the Great Recession**

Brown et al. (2013) found that during the Great Recession NPOs with over \$50,000 in revenue were more likely to cut services and "...take other drastic steps" than close their doors (p. 5). What is more, the percentage of NPOs during this time period with over \$50,000 in revenue decreased by only 5%, a loss of 12,831 NPOs (267,331 – 254,500) (Brown et al., 2013). This means 95% of the NPOs with over \$50,000 in revenue were able to survive and maintain at least this level of revenue by, supposedly,

cutting services and taking "...other drastic steps" (Brown et al., 2013, p. 5). However, if some of these NPOs had a sufficient profit margin before their revenue started decreasing, they may have cut their services to maintain or try to keep this level of finances, possibly because of imminent, future financial uncertainty (Brown et al., 2013). This is a possibility that is normally ruled out because of its association with the way for-profit organizations behave (Mitchell, 2015; Ramirez, 2011). Yet because such little research has been conducted on profit accumulation in NPOs (Calabrese, 2012), it is not certain NPOs did not act this way during this time.

A study conducted by the Urban Institute indicated that despite some small setbacks, overall, the nonprofit sector grew by 8.6% from 2002 to 2012, which includes the before and aftermath years of the Great Recession (Brown et al., 2013; McKeever & Pterrijohn, 2014; Ramirez, 2011). What is interesting, though, is the Urban Institute found \$12.86 billion less was given to NPOs from 2002 to 2012 (\$348.03 - \$335.17) (McKeever & Pterrijohn, 2014). In other words, the nonprofit sector received \$12.86 billion less in total financial support (to include individuals, businesses, and foundations) between 2002 and 2012, yet by 2012 it grew 8.6% (McKeever & Pterrijohn, 2014). However, in order for it to have grown while receiving less financial support the nonprofit sector had to have set money aside for its long-term survival; otherwise, the total number of NPOs would be significantly less (McKeever & Pterrijohn, 2014; Ramirez, 2011). Instead, an additional 123,840 NPOs arose from 2002 to 2012, thus bringing the total number of NPOs filing taxes to 1.44 million, or an increase of 8.6% ( $123,480/1,440,000$ ) from 2002 to 2012 (McKeever & Pterrijohn, 2014).

Additionally, researchers found the overall cash holdings (profit) by the nonprofit sector grew from “\$801 billion in 1997 to \$1.7 trillion” by 2007 (Ramirez, 2011, p. 675), and that by 2013 total assets (to include cash holdings) in NPOs came to \$3.22 trillion (McKeever & Pterrijohn, 2014). It was also found that employment in NPOs grew during this time by 8.5%, which is only .01% less than the rate by which this sector grew (Markowitz, 2016). Though this suggests service offerings remained relatively unaffected, because this is a general statistic of the entire NPO population, much of this growth could be smaller NPOs that were just beginning to grow (Monthly Labor Review, February 2016). NPOs with revenue in excess of \$500,000, therefore, could have chosen to retain their profit by taking drastic steps (i.e., cutting services) (Brown et al., 2013; Calabrese, 2012). It is possible they wanted to maintain their financial position, but it is more likely they believed the recession years were going to worsen their financial position, and so they may have planned accordingly (Brown et al., 2013; Calabrese, 2012). As such, it is worthwhile to examine how NPOs with revenue in excess of \$500,000 (since these NPOs would be more likely to have financial reserves) were affected during the Great Recession of 2007-09 (Brown et al., 2013; Ramirez, 2011). They may have weathered these years by allocating more revenue toward profit accumulation than services (Calabrese, n.d.; Ramirez, 2011).

### **The Present Study’s Goal**

In essence, researchers found that while the nonprofit sector experienced an overall growth of 8.6%, they also found \$12.86 billion less was given in total donor support to NPOs from 2002 to 2012 (McKeever & Pterrijohn, 2014). However, due to the scant amount of research on profit accumulation in NPOs (Calabrese, 2012), it has

usually been assumed that in order to make up for receiving this much less in total donations, NPOs that accumulated profit during this time used it to continue offering the same amount of services (Calabrese, n.d.; Greenlee & Trussel, 2000; Tuckman & Chang, 1991). This may not be what happened. If the nonprofit sector grew to \$3.22 trillion while receiving \$12.86 billion less in funding, how were they able to do so without focusing more on accumulating profit? (Brown et al., 2013; Calabrese, 2012; Ramirez, 2011). The present study's goal is to contribute to researchers' understanding of the ways NPOs survived by examining if NPOs accumulated profit during the peak years of the Great Recession, 2009 to 2010.

### **Purpose of Study**

The study's purpose is to apply a systems theory to answer the research questions: 1) did revenue increase or decrease for NPOs during recession years from 2009 and 2010; and 2) did some NPOs during this time allocate more money toward accumulating profit than service expenses? The lack of literature on this subject warrants further investigation (Francois, 2015).

### **Definitions of Key Terms to be used in this Study**

To avoid confusion on the meaning and use of certain technical terms used throughout this research study, this section will define what these terms are.

The term Revenue defined the total amount of cash NPOs receive each year as reported on their IRS 990 Form, to include total donor support (Bowman, 2011). The term Profit defined excess revenue left over after all expenses are accounted for. As will be further clarified in the literature review, the term Financial Reserves defined the percentage of revenue with which NPOs have to run their operations. This research study will use two

financial ratios given by Tuckman and Chang (1991) to determine this percentage. It is crucial to note that since financial reserves only take into consideration assets, liabilities, and expenses. Profit is what is available after these are accounted for. Financial reserves do not measure profit. Services Expenses, as previously mentioned, defined anything NPOs do to help clients (the people NPOs serve) with their problems. Service Expenses might seem like a difficult thing to measure and account for, due to the fact that they are not always documented; for the purposes of this study, services were measured simply by looking at what NPOs paid in total expenses toward programs and services in their IRS 990 Forms. Without conducting an in-depth examination of service documentation in each NPO, this has been suggested as being the best way to determine the amount of money NPOs spent on their services (Greenlee & Trussel, 2000). Defining Service Expenses this way will also make it easier to examine a larger amount of NPOs in a timely manner.



## CHAPTER II

### LITERATURE REVIEW

This literature review will first describe the financial tool ratio analysis and why it is important social workers understand this tool. It spells-out the logic behind Tuckman and Chang's (1991) definition of financial reserves in NPOs and then used two of Tuckman and Chang's financial ratios to later determine the amount of cash in an NPO's financial reserves. The literature review will then examine the two most pertinent objections that have been raised against them. From here, the study used additional literature to apply an open-systems theory to answer why NPOs sometimes choose to drain their profit. This study did this by examining Emery and Trist's (1963) open-systems theory on the four causal environments NPOs operate in.

#### **Ratio Analysis as a Tool for Understanding Financial Reserves**

In order to provide social workers with an adequate understanding of financial reserves, this literature review will now discuss an important tool social workers can use to help their organizations determine how much money they have in their reserves (Greenlee & Trussel, 2000).

Unlike many human service professionals, social workers receive training on how they can help their agencies avoid having to cut services due to revenue depreciation (Blalack, 2016; Greenlee & Trussel, 2000; Tuckman & Chang, 1991). An important financial tool social workers receive training on to help NPOs determine whether they are

financially stable enough to continue paying expenses and providing services is ratio analysis (Tuckman & Chang, 1991). Though this tool is sometimes overlooked in the social work education curriculum, more and more educators and administrators are seeing the immense value it has in helping future practitioners (Charity Navigator, 2016). As such, making it available to social work students not only helps them become better practitioners but it also helps them see how they are part of a bigger picture when it comes to offering services in the mental health field.

Ratio analysis familiarizes one with an NPO's IRS 990 Form by providing simple math equations these Form's line numbers can be entered into (Charity Navigator, 2016). For example, a debt to assets ratio is defined as "dividing total debt (the difference in revenues and spending) by total assets"  $(\text{Revenue} - \text{Spending}) / \text{Total Assets}$  (Hunter, 2014, p. 3). The closer the result of this equation is to 1 the better the NPO is able to use current assets to pay debt (Charity Navigator, 2016), which implies the further the result is from 1 the less likely it can do so (Greenlee & Trussel, 2000). The debt to assets ratio is just one of many ratios practitioners can use to determine whether an NPO is financially stable enough to continue providing the same level/quality of services or whether it must start using financial reserves to do so (Charity Navigator, 2016; Tuckman & Chang, 1991). It is up to the NPO to determine if the ratios indicate it is in danger of being unable to continue offering services or pay service and administrative expenses with revenue (Bowman, 2011; Charity Navigator, 2016; Tuckman & Chang, 1991). Financial ratios, nevertheless, offer social work practitioners a number of advantages they can use to make this determination (Charity Navigator, 2016; Tuckman & Chang, 1991).

The advantages of using ratio analysis to determine the financial shape are 1) to provide social work practitioners with a clearer understanding of the NPO's financial status; 2) to tell social work practitioners if the NPO is in danger of having to cut services or will be unable to pay its expenses with revenue (Bowman, 2011; Charity Navigator, 2016; Greenlee & Trussel, 2000; Tuckman & Chang, 1991); and 3) to give social work practitioners a better overall understanding of how the NPO operates, which, in turn, helps practitioners better connect NPOs with their community (Prentice, 2015). Social work practitioners that are unable to properly use ratio analysis will be less likely to do these things and, as a result, will struggle with understanding how their services can reach larger audiences (Blalack, 2016; Carroll & Stater, 2008; Greenlee & Trussel, 2000; Sontag-Padill et al., 2012; Prentice, 2015; Tuckman & Chang, 1991). It is therefore indispensable that social worker practitioners educate themselves on using ratio analysis, so they can understand what an NPO needs to do to avoid situations where services must be cut (Tuckman & Chang, 1991).

Having established the importance of ratio analysis, as well as demonstrating how it can be used by social workers, what led to (arguably) the four best and most often discussed financial ratios in the literature on NPOs will be presented (de Andrés-Alonso, Garcia-Rodriguez, & Romero-Merino, 2015; Greenlee & Trussel, 2000; Tuckman & Chang, 1991). It is hoped that an understanding of these four financial ratios will give social workers insight on how to determine NPOs have enough in their financial reserves in case of emergencies. As previously mentioned, this study will use two of these ratios as determinants of financial reserves in NPOs. This is to simplify the study, as well as help provide researchers with a new way of applying Tuckman and Chang's study to

NPO financial management. It also is hoped that this research will additionally keep Tuckman and Chang's classic research on financial management in NPOs alive in researchers' minds.

### **Tuckman and Chang**

The topic of what ratios can be used to determine an NPO has sufficient funds in its reserves has been discussed in a variety of forms throughout the literature regarding NPOs since at least 1991 (de Andrés-Alonso et al., 2015; Greenlee & Trussel, 2000; Prentice, 2015; Tuckman & Chang, 1991). Prior to that time researchers in the for-profit sector developed financial ratios that informed organizations if they were in danger of having to file bankruptcy; these researchers were Beaver (1966) and Altman (1968) (Tuckman & Chang, 1991; Greenlee & Trussel, 2000; Woods, 2011). The "inherent modeling flaw" in using bankruptcy filing as an indicator of an NPO's financial reserve status, though, is by law these organizations "...cannot be legally forced into liquidation or reorganization" (Simon, Dale, & Chisolm, 2006; Prentice, 2015, p. 3; 11 U.S.C.A § 303 (a)). Rather, NPOs may file bankruptcy simply to "thwart a labor dispute," or to change names, or for a variety of reasons having nothing to do with whether their financial reserves are sufficient to pay operational costs (Greenlee & Trussel, 1991, p. 201; Prentice, 2015). It is for these reasons future researchers decided to look for more accurate descriptions and ways of determining NPOs had sufficient financial reserves on hand (Greenlee & Trussel, 2000; Prentice, 2015; Tuckman & Chang, 1991).

### **Tuckman and Chang's Four Financial Ratios**

The most notable undertaking of this task was conducted in 1991 by Tuckman and Chang, who argued that NPOs were unable to withstand severe depreciation (or

financial shock) in their revenue are likely to “immediately” cut their services (p. 445).

Tuckman and Chang supported this argument by developing a conceptual framework that predicts when an NPO will become financially vulnerable to revenue depreciation.

Known as the Four Operational Criteria (FOC), this conceptual framework uses four quintiles that rank from high to low an NPO’s ability to withstand severe financial shock (e.g. the closer an NPO’s quintile ranking is to 1 the better it can withstand financial shock (Greenlee & Trussel, 2000; Bowman, 2011)).

These four quintiles are listed as follows:

*1. Inadequate Equity Balances*

Subtracting liabilities from Assets (restricted/unrestricted accounts and liquid cash), and then dividing by total revenue:

$$(\text{Assets} - \text{Liabilities}) / \text{Total Revenue}$$

represents available revenue for dealing with financial shock. The numerator in the *Inadequate Equity Balance* equation is Tuckman and Chang’s definition of equity.

*2. Revenue Concentration*

The sum of revenue sources divided by total revenue squared:

$$\sum (\text{Revenue Source}_j)^2 / \text{Total Revenue}$$

represents an NPO’s susceptibility to financial shock should its revenue sources start becoming eliminated, what is known as a Herfindahl Index.

*3. Low Administrative Costs*

Dividing administrative expenses by total expenses:

$$\text{Administrative Expenses} / \text{Total Expenses}$$

represents how much in administrative expenses can be used to combat financial shock.

#### *4. Low or Negative Operating Margins*

Subtracting expenditures from revenues, and then dividing by revenues:

$$(\text{Revenues} - \text{Expenses}) = \text{Total Surplus/Revenue}$$

is the percentage an NPO's Net Income (NI) represents its revenue. This percentage is the total surplus available to offset declines in revenue due to financial shock (Tuckman & Chang).

#### **The Four Ratios as Determinants of an NPO's Financial Reserves**

NPOs ranking low in any one quintile are "at-risk" of not providing the same amount or quality of services after a financial shock, whereas NPOs ranking low in all four quintiles are "severely-at-risk" of not providing the same amount or quality of services after a financial shock (Tuckman & Chang, 1991, p. 451; Bowman, 2011).

Conversely, NPOs with high quintile rankings have more flexibility in their finances, and so, it can be reasoned, are unlikely to "...reduce [their] service offerings" (Greenlee & Trussel, 2000, p. 200; Tuckman & Chang). Spelling out the logic:

- 1) if low quintile rankings predict an NPO will cut services;
- 2) and cutting services after experiencing financial shock indicates an NPO lacks sufficient funds to continue operations as normal;
- 3) then low quintile rankings are good indicators that an NPO has insufficient funds in its financial reserves for surviving a financial shock, and vice-versa (Prentice, 2015; Tuckman & Chang, 1991).

High quintile rankings, on the other hand, cannot be used as predictors of services being cut because these NPOs always have the option of either cutting services or depleting their financial reserves (Calabrese, 2012). Therefore, since replication studies after

Tuckman and Chang only tested whether low quintile rankings predict services would be cut, it remains to be seen whether NPOs with high quintile rankings deplete financial reserves to maintain the same level of service offerings (Greenlee & Trussel, 2000). To this researcher's knowledge, this assumption has never been tested. It has been implied (most notably by Tuckman and Chang, 1991) that NPOs with high quintile rankings would use their accumulated profit after experiencing a financial shock to maintain the same level of services. The easiest way of verifying this is by examining NPOs during the great recession to see if, despite experiencing an increased demand for services, they allocate more revenue toward accumulating profit. Verifying the validity of this possibility is of utmost importance, then, to the study of financial management in NPOs. Finding evidence against it might change some of the views researchers have on how NPOs sometimes manage their finances.

Nevertheless, Tuckman and Chang's (1991) study on financial vulnerability made two important contributions to the literature on financial management in NPOs. First, their study provided researchers with four financial ratios that determined how well NPOs could continue providing services if their revenue suddenly started depreciating (Tuckman & Chang, 1991). Second, they demonstrated the likelihood of services being cut can be predicted by the quintile rankings of these four financial ratios (Tuckman & Chang, 1991). It naturally follows that quintile rankings may accurately inform NPOs of how much they have available in their financial reserves. However, empirical support is needed to show NPOs with low quintile rankings gradually begin cutting services; otherwise, these rankings may not be as accurate in informing NPOs of what they have

available in their reserves as some researchers would like to think (Bowman, 2011; Greenlee & Trussel, 2000).

### **Empirical Support for the Four Quintiles**

Greenlee and Trussel (2000) conducted one of the first major empirical studies to test whether low quintile ratings predict NPOs will cut services (Tuckman & Chang, 1991). Greenlee and Trussel did this by comparing program expenses of NPOs with low quintile rankings (from 1985-1995) with NPOs from the same time period with normal to high quintile rankings. Greenlee and Trussel's study found NPOs with lower quintile rankings in three quintiles (2, 3, and 4) consistently spent less in program expenses, as reported on IRS Form 990 (please see Table 1) (Greenlee & Trussel, 2000). This meant ranking low in three quintiles can negatively affect an NPO's ability to continue providing the same amount of services (Greenlee & Trussel, 2000). Greenlee and Trussel's findings were important for two reasons: 1) they empirically supported Tuckman and Chang's argument that NPOs with low quintile rankings are likely to cut services; and 2) they provided empirical evidence that high quintile rankings might explain why some NPOs do not need to cut their services (Prentice, 2015).

Table 1

#### *Quintile Rankings for NPOs over a three-year period*

NPOs Over a Three-Year Period	Quintile Ranking
Inadequate Equity Balance:	0.875
Revenue Concentration:	0.625
Low Administrative Costs:	0.100
Low or Negative Operating Margins:	0.250



It can therefore be expected that NPOs with low quintile rankings from 2007 to 2010 experienced a decline in the amount of services being offered, but it is not necessarily true that NPOs that had high quintile rankings, and thus were able to use their surplus revenue to accumulate profit, during this time increased their amount of service offerings (Tuckman & Chang, 1991). Since these NPOs may also cut their services, an examination of NPOs with high quintile rankings may yield contrary information to what researchers have normally expected such NPOs to do (Greenlee & Trussel, 2000; Calabrese, n.d.). The importance of examining these NPOs lies in verifying whether researchers' assumptions on how they deal with revenue depreciation are correct. However, it is entirely possible that there is no relationship between revenue depreciation, financial reserves, and service offerings in NPOs with high quintile rankings. This literature review will now discuss the possibility that an extraneous variable could better explain why these NPOs might be able to retain their services and financial reserves, even if their revenue depreciates (Bowman, 2011).

### **Bowman's Disagreement with Tuckman and Chang**

Tuckman and Chang, of course, only set out to identify when an NPO is in danger of cutting services, to which researchers agree was a successful venture (Greenlee & Trussel, 2000). By doing so, Tuckman and Chang provided NPOs with four financial ratios that could determine if their current revenue was sufficient enough to provide services after it depreciated (Tuckman & Chang, 1991). Greenlee and Trussel tested these four financial ratios and found that over time (three years) NPOs with lower quintile rankings gradually began cutting services (Greenlee & Trussel, 2000). It can therefore be assumed that NPOs that do not cut, or increase, their services have higher quintile

rankings, but this is not necessarily true (Bowman, 2011). The late Woods Bowman, for example, presents a case in which NPOs with low quintile rankings will still be able to provide the same level of services.

### **Possible Extraneous Variable**

Not all researchers agree low quintile rankings indicate there is a strong likelihood that an NPO will cut its services (Bowman, 2011). Bowman implied that because some NPOs are able to finance expenses with debt they do not need to set anything aside in their profit margin. Increasing debt, then, is an extraneous variable that may better explain why NPOs retain their financial reserves and service offerings (Bowman, 2011; Tuckman & Chang, 1991). These NPOs can continue offering the same amount of services, regardless of their profit margin, by simply letting their debt increase (Bowman, 2011; Tuckman & Chang, 1991). In relation to this study, if these NPOs offer services without using profit, then a reduction in their revenue may have no effect on the amount of services they provide (Calabrese, n.d.). NPOs, in other words, they do not need to worry about accumulating profit because it is possible to continue providing services, even if revenue begins depreciating (Bowman, 2011). Therefore, if NPOs can avoid cutting services and draining their profit when their revenue starts depreciating, then NPOs may not need to cut their services to preserve their profit margin.

The reason why some NPOs can maintain both their service and their profit margin when their revenue depreciates, though, is their debt collectors are willing to put up with the additional amount of debt they accumulate (Bowman, 2011). This is not necessarily a problem. To clarify, it does not take much insight or experience in working with NPOs to realize some of their supporters believe so strongly in the mission that they

will do all they can to support the NPO (Charles & Kim, 2016; Grizzle, 2015). In fact, research supports the argument that funders are more likely to help NPOs that have less accumulated profit (de Andrés-Alonso et al., 2015). These funders believe NPOs that struggle with finances are doing all they can to support their mission and so view their struggle as an indication of the importance of the NPO's mission (de Andrés-Alonso et al, 2015). As such, if debt collectors also feel this way, then they may be willing to tolerate the amount of debt that is being generated by certain NPOs (Bowman, 2011).

While it may be burdensome on funders and debt collectors to continue offering financial support in these situations, as long as they continue doing so the NPO will not need to worry about their financial reserves or cutting services (Bowman, 2011; de Andrés-Alonso et al., 2015). NPOs might use this kind of support to pay service and employee expenses, and, as a result, they will avoid having to cut services or drain their profit margin (Calabrese, n.d.). Again, this does not seem like something NPOs would do, but if they determine that they need their reserves to continue operating in the future, it is something they might do (Calabrese; Mitchell, 2015). Therefore, because Bowman's disagreement with Tuckman and Chang (1991) is valid, spelling out his argument against using Tuckman and Chang's financial ratios as indicators of their ability to pay services may provide an alternative way of understanding how NPOs use their financial reserves. In any case, doing so should give stronger reasons for or against using Tuckman and Chang's FOC as a dependent variable that can be affected by revenue fluctuation.

### **Bowman's Argument**

The trouble with using quintile rankings as an indication of an NPO's ability to provide services is they do not take into consideration how inflation affects an NPO's

long-term financial sustainability (Bowman, 2011; Greenlee & Trussel, 2000). Bowman argued an NPO's long-term financial sustainability is determined more by its ability to keep its assets from depreciating below the national inflation rate—which from 1920-2006 was 3.4%. NPOs unable to do this will consistently receive a lower Return on Assets (ROA) rate than what is needed to remain financially stable in the long-term (Bowman, 2011). To illustrate, NPOs scoring an “astonishingly low” 0.13 (p. 41) on the *Inadequate Equity Balance* quintile (see Table 2):

$$\text{Net Assets: } \$2,790 / \text{Total Assets: } \$20,994 = .13$$

but have an ROA rate of 3.2%:

$$\text{ROA} = 100\% (\text{line 73B} - \text{line 73A}) / \text{line 59B, or}$$

$$\text{ROA} = 100\% (\$2,790 - \$2,123) / \$20,994 = 3.2\%$$

are only 0.2% (3.4% - 3.2%) away from keeping their assets from depreciating below the national 3.4% inflation rate (Bowman, 2011). These NPOs need very little (about 0.2%) in comparison to NPOs that consistently need more revenue to keep their ROA rate from depreciating below the national inflation rate of 3.4% (Bowman, 2011). Bowman's point is an NPO's ROA rate contributes more to its long-term financial sustainability than its quintile rankings (Tuckman & Chang, 1994). Table 2 used and taken from Bowman's 2011 research.

Table 2

*Activity Data (in \$1,000)*

<b>Assets</b>	2007	2006
Cash and cash equivalents	\$1,584	\$567
Other current assets	8,006	7,983
Investments	748	5,708
Property, plant, and equipment	9,650	5,586
Other assets	1,081	0
<b>Total assets</b>	<b>\$20,993</b>	<b>\$19,844</b>
<b>Liabilities</b>		
Current liabilities	\$3,272	\$3,348
Mortgages, bonds, and notes	9,417	9,047
Other liabilities	4,481	5,325
<b>Total liabilities</b>	<b>\$18,204</b>	<b>\$17,720</b>
<b>Net assets (unrestricted)</b>	<b>\$2,790</b>	<b>\$2,123</b>
<b>Total liabilities and net assets</b>	<b>\$20,994</b>	<b>\$19,843</b>
<i>Supplemental Activity Data</i>	2007	2006
Expenses before depreciation	\$52,391	\$40,330
Depreciation	\$744	\$480

### **The Problem with Bowman's argument**

Bowman (2011) assumed NPOs unable to keep their ROA rate above the current rate of inflation will have to pay more in total liabilities and net assets each year. The problem with Bowman's assumption is it is not necessarily the case that NPOs must use hard assets (Property, Plant, and Equipment) to pay liabilities (Bowman, 2011). In fact, depreciation in the value of these particular assets only affects NPOs that use them to pay liabilities; it does not affect NPOs who otherwise choose to pay liabilities with revenue (Bowman, 2011). Therefore, since the ROA rate of these latter NPOs may fall well below the national rate of inflation without affecting their ability to pay liabilities, ROA rates are only applicable in cases where NPOs pay liabilities with hard assets (Bowman, 2011; Prentice, 2015; Tuckman & Chang, 1991). Since most NPOs have few assets to use as

collateral anyways, Bowman's argument mainly applies to larger NPOs that pay liabilities with hard assets.

Nevertheless, Bowman (2011) brings up a valid point that NPOs should consider ROA rates when determining their financial reserves are sufficient to help them continue providing services. NPOs that do not may be unable to finance their debt with their hard assets and will generate more and more debt over time if they use hard assets to finance debt (Bowman, 2011). However, it seems NPOs avoided using hard assets to finance debt during the Great Recession because instead of there being an overall depreciation in the total value of NPOs, the entire sector grew from \$1.7 trillion in liquid assets to \$3.22 trillion in total assets from 2007 to 2013 (Ramirez, 2011). Since it is unlikely this sector would have been able to make such a gain during this time had they continued financing debt with hard assets, the extraneous variable financing expenses with debt does not seem to have played a significant part in influencing the behavior of NPOs (Bowman). This extraneous variable, in other words, is not significant enough to explain why some NPOs with high quintile rankings may have cut services to retain their profit margin.

Instead of taking Bowman's argument to mean quintile rankings are less important in helping NPOs determine the status of profit margin, researchers should remember inflation only affects an NPO's hard assets, if it chooses to use those assets to finance debt (Bowman, 2011). Since it does not affect the amount of available cash in an NPO's financial reserves, and Tuckman and Chang's (1991) quintile rankings mainly deal with available cash in these reserves, Bowman's objection that quintile ranking do not take into consideration ROA rates is unwarranted. Rather, inflation largely affects NPOs that use hard assets to pay liabilities with, but because these NPOs did not create

enough debt to affect the overall growth of the nonprofit sector, debt is not expected to play a significant role in explaining the relationship between revenue, service expenses, and profit/debt. Instead, the literature on NPOs suggests a better explanation of this possible relationship is the idea that these NPOs were simply planning for an unstable financial future (Brown et al., 2013). This research study, nevertheless, will test the hypothesis that NPOs increased their debt to maintain the same level of services; that way it can be verified that the literature is correct that NPOs during this time period did not rely on debt to avoid cutting services.

Before outlining a systems theory to explain why NPOs might cut services to keep their profit margin in tack, or increase their profit margin faster than their service expenses, Prentice's (2015) argument against Tuckman and Chang's (1991) financial ratios will be presented. Overcoming Prentice's objection will provide ample support for positing that a relationship exists between revenue, service expenses, financial reserves, and profit/debt. The study will then examine Emery and Trist's (1963) open-systems theory to identify the type of environment NPOs operated in during the recession years.

### **Prentice's Argument Against Tuckman and Chang**

It seems natural that the traditional factors Tuckman and Chang (1991) used to determine the likelihood that an NPO will cut services can also be used to determine whether an NPO will pay total liabilities and expenses with revenue at a future time. Prentice (2016) argued these traditional factors cannot be used to do this, however, because they are only indicators of an NPO's current financial situation. The main gist of Prentice's argument can be summed up as follows: because the traditional factors only inform NPOs of how well they financially performed in the past, they can only determine

the likelihood that an NPO will continue performing this way in the future. However, if they cannot be taken to mean an NPO will continue to maintain its level of service offerings and profit/debt, then revenue may not affect service offerings and profit margin in NPOs (Prentice, 2015). An NPO's ability to offer services may be more affected by something else.

It is important to note that Prentice (2015) is instead that suggesting service offerings and profit/debt are more affected by environmental factors, such as “gross domestic product and state product [, and] median household income” (p. 828). While this may be true, it is beyond the scope of this study to test how these factors affect NPOs. Rather, this study will see how NPOs have dealt with revenue fluctuation itself, instead of examining the causes of revenue fluctuation and financial performance (Prentice, 2015). Before moving on to the methodology section to describe how this will be done, the literature review will now examine a plausible theory for explaining why NPOs might hold on to their profit margin when their revenue depreciates (Ramirez, 2011). This should provide a thorough understanding of why NPOs might do this, as well as providing a link between social work theory and real-life choices in NPOs.

### **Open-Systems Approach for Why NPOs Retain Profit**

One of the most difficult situations Nonprofit Organizations (NPOs) must deal with is deciding what to do when their revenue suddenly starts depreciating (Tuckman & Chang, 1991). A number of possible options are available for NPOs in such situations: 1) they can use what money they have saved up to compensate for the sudden financial loss (Tuckman & Chang, 1991); 2) they can begin cutting services to avoid spending additional money they have saved up; or 3) they can do nothing, in which case they either



hope to find additional funding, or they simply allow their debt to increase (Bowman, 2011). It is generally assumed NPOs in these tough financial situations will go for option 1 (Bowman, 2011; Tuckman & Chang, 1991); however, sometimes the best option is to cut services in lieu of spending whatever money has been saved up. The argument is doing so puts them in a better financial position to prepare for additional financial difficulties—and that this is necessary if they want to continue offering services in the future.

There are compelling reasons both for and against NPOs cutting services in lieu of spending money they have saved up. The most primary reason has to do with being able to continue paying service expenses in the long-run (Bowman, 2011). Many times NPOs will make sacrifices, so they can continue offering services to larger populations, which often means they must drain what finances they have saved up. On the other hand, NPOs may realize that the environment they are in dictates that they must retain their financial reserves in order to survive at all (Emery & Trist, 1963). Though NPOs in this situation seem to operate more in accordance with their for-profit counterparts (Calabrese, n.d.), they are actually better adapting themselves to their external environment (Emery & Trist, 1963).

Looking at the situation from an open-systems perspective, then, suggests NPOs sometimes cut their services in lieu of spending their financial reserves because they are adapting to their external environment (Emery & Trist, 1963). To put this in the most simple and easy to understand language: NPOs that realize their funding sources are going to start becoming less available, but want to continue providing some level of services, might cut their services instead of using their accumulated profit to provide the

same level of services (Calabrese, 2012). These NPOs might realize that in order to survive they must retain their accumulated profit because their funding sources will become less and less available, and so will cut their services and not drain their accumulated profit (Mitchell, 2015). Instead of viewing this as something for-profit organizations do (Calabrese, 2012), it is possible these NPOs are simply better adjusting themselves to their external environment (Emery & Trist).

### **Description of the Four Environments NPOs Operate in**

Emery and Trist (1963) provided four descriptions of the overall external environment NPOs operate in, which are listed and described as follows:

*Placid Randomization Environment:* This environmental texture is best characterized as one in which there is no governmental control or order. There is no point for NPOs to develop a strategy or a tactic on how to survive because there is literally no point. NPOs must instead fend for themselves by planning for the unexpected, taking advantage of every opportunity they can—a sort of survival of the fittest environment.

*Placid Cluster Environment:* In a placid cluster environment, NPOs can use tactics and strategies to determine trends in funding sources and service needs because there is now a steady amount of order and regulation in the environment they operate in (e.g., predictions can be made as to what types of funding will be available; the future is very predictable).

*Distributive-Reactive Environment:* The change between a Placid Cluster Environment and a Distributive-Reactive Environment is now there is competition between organizations for funding and services. This means NPOs must deal with

additional legislation and regulation in order to obtain funding, as well as the persistence of other NPOs competing for the same resources.

*Turbulent Field:* A turbulent field is perhaps the most accurate description of the environment today's NPOs operate in. Emery and Trist describe it as a field in which the ground itself that a NPO works in is shaking from the turbulence created from the other three environments. To illustrate, imagine an NPO is represented by a rat working its way across a table to get a piece of cheese. The rat must watch out for obstacles (i.e. government regulation), and other rats (competition); however, what makes this highly complicated is the table itself is shaking; in the same way, NPOs must deal with all these obstacles and the turbulence they create (Tom Winter, personal communication, May, 2014).

The purpose of discussing Emery and Trist's (1963) four environmental textures is that they represent two polar extremes NPOs swing between, much like a pendulum. This is important to note because the type of environmental texture NPOs are in may determine the type of decisions they make. For example, NPOs in a Placid Cluster Environment are more able to predict what type of funding they will receive, would be less likely to cut their services due to financial uncertainty (Emery & Trist, 1963). NPOs in a Placid Randomization Environment, however, would be more concerned with basic survival and so might see the benefit of cutting their services in lieu of draining their accumulated profit because if they do not, they may be in a worse position (Emery & Trist, 1963). As such, Emery and Trist's four environmental textures provide an excellent framework for the type of decisions NPOs must make to adapt to their external environment.

This study proposes NPOs from 2009 to 2010 operated in an extremely unpredictable environment, much like a *Placid Randomization Environment*, and that sometimes the best choice for them to make in this environment is to cut services in lieu of using their accumulated profit (Brown et al., 2013; Ramirez, 2011). Known as an open-systems approach to revenue fluctuation in NPOs, this study proposes NPOs that choose to do so are simply adjusting themselves to their external environment (Mitchell, 2015). If this is true, then it can be expected that NPOs during this time resorted to making such decisions because doing so was their best option for surviving. In fact, based on Greenlee and Trussel's (2000) research, it is reasonable to suspect that NPOs that did not do this become more susceptible to financial failure, and as a result, may have had to close their door permanently. It is altogether possible that such NPOs may have set an example, or a warning, that NPOs that operate in uncertain environments have a better chance at survival if they hold on to their financial reserves.

#### **Brief Reiteration and Objection to the Placid Randomization Environment**

To briefly reiterate, ratio analysis is an important tool social workers can use to determine what NPOs have available in their financial reserves. Tuckman and Chang (1991) developed four of the most empirically supported financial ratios that can be used for doing this. One of the arguments against using these financial ratios to determine what is financially available in reserves essentially said NPOs simply amass more and more debt each year—which implies they might increase their financial reserves faster than their service expenses (Bowman, 2011). As spelled out in the introduction, since the nonprofit sector has been steadily growing since at least 1997 (Ramirez, 2011), much of this debt would have to have prevented such growth (Brown et al., 2013). It follows that

in order for the nonprofit sector to have grown as much as it did it had to have held on to much of its financial reserves, especially since it received less in donor support from 2002 to 2012 (McKeever & Pterrijohn, 2014).

Since the nonprofit sector received less in donor support, but grew to a larger size, it is likely that in order for it to have done so some NPOs in the sector cut their services in lieu of draining their financial reserves or profit (Mitchell, 2015). This kind of behavior is normally thought to be exemplified by for-profit organizations, but since NPOs may have done this to better adapt themselves to their external environment, an open-systems theory can explain why they may have done so (Emery & Trist, 1963). Put simply, adjusting to their environment (Calabrese, n.d.) caused them to cut services in lieu of draining their profit margin. It was also found that the type of environment NPOs operated in can be characterized as a *Placid Randomization Environment*, meaning they had to take extreme measures to survive (Emery & Trist, 1963). However, it can also be argued to be classified as a *Turbulent Field*. This is because NPOs did not just have random income sources; they also dealt with competition from other NPOs over scarce resources, as well as having to abide by additional governmental regulation (Emery & Trist, 1963).

What Emery and Trist (1963) mean by a Turbulent Field, however, is one in which governmental control, and competition by other organizations, is making it extremely difficult for NPOs to fulfil their individual missions. It turns out that the solution to this problem is for NPOs to work together by formulating an agreed upon set of values, such as taking into consideration another NPO's need for survival, so that, overall, all NPOs can promote the well-being of society (Blalack, 2016). Working

together by using a collective set of values, as opposed to an individualist or survival of the fittest set of values, therefore, was argued by Emery and Trist to be how NPOs (and all organizations) can create a market environment that is conducive to the well-being of society. To reiterate, a marketplace in which each NPO (or organization) is ruthlessly placing their own needs above the needs of all other NPOs is one that will surely create a *Turbulent Field* (Emery & Trist, 1963). That is why Emery and Trist eventually argued that in order for the marketplace to properly function there must be an agreed upon set of values each organization abides by. The most likely set of values for this would be collective ones that allow all organizations to work together.

It does not seem tenable to posit that during the recession NPOs could work together according to an agreed-upon set of values. To clarify, in order for NPOs to have worked together in this environment, they would have had to share their resources in a way that was fair and conducive to the survival of each NPO. Since there were fewer resources for NPOs to share, though, it would have been impossible for them to work according to such a set of values (Brown et al., 2013). Instead, NPOs during this time were in a tough position to where they had to make extreme, and drastic (Brown et al.), decisions, such as cutting services and "...other drastic steps" to avoid closing their doors (p. 5). It is therefore hard to imagine NPOs during this time could both work together by sharing resources that promoted an agreed upon set of values if in order to survive they had to take such drastic measures. Because such drastic measures preclude them from abiding by this set of values, and this value set is what NPOs need to abide by to operate in a *Turbulent Field*, it stands to reason that NPOs during this time did not operate in a *Turbulent Field*. The more reasonable conclusion is due to the unpredictable nature of the

environment they operated in, they were in a *Placid Randomization Environment*. Such an environment, arguably, better explains why an NPO might 1) cut services in lieu of draining their financial reserves; and 2) build their financial reserves faster than their service expenses when revenue increases.

### **Summary of the Arguments**

Based on the literature, there are five arguments that describe what NPOs might do when their revenue fluctuates. These arguments do not predict what NPOs will do; rather, they describe what NPOs have done in an unstable external environment.

1) The first argument is based on Calabrese (2012) and Ramirez (2011):

When revenue begins depreciating compared to the previous year, these NPOs cut their services to retain their profit.

2) The second argument is based on Tuckman and Chang's (1991) assumption:

When revenue begins depreciating compared to the previous year, these NPOs start depleting their profit to maintain the same level of services.

3) The third argument is based off Bowman (2011) :

When revenue begins depreciating compared to the previous year, service offerings and financial reserves will stay the same and debt will increase.

4) The fourth argument is again supported by Calabrese and Ramirez:

When revenue begins increasing compared to the previous year, NPOs will allocate more money toward profit than they will toward services.

5) The fifth argument is again supported by Tuckman and Chang:

When revenue increases, services and financial reserves will increase, but profit will stay the same. Table 3 displays these arguments with their corresponding authors.

Table 3

*Changes from 2009 to 2010*

Arguments	Change in Revenue	Change in Services	Change in Financial Reserves	Change in Profit/Debt	Author
1	Decrease	Reduce	Same	Same	(Calabrese, 2012; Ramirez, 2011)
2	Decrease	Same	Same	Decrease	(Tuckman & Chang, 1991)
3	Decrease	Increased	Same	Decreased	(Bowman, 2011)
4	Increase	Same	Same	Increase	(Calabrese, 2012; Ramirez, 2011)
5	Increase	Increase	Increase	Same	(Tuckman & Chang, 1991)

The five possible arguments, based on the literature review, were examined using the empirical methodology that is described in the following section. This methodology was used to examine how NPOs behaved when their revenue began to change and if they did, in fact, behave (i.e., more in accordance with their for-profit counterparts) and to test if an open-systems theory can show that NPOs allocated more revenue toward profit than services to better adapt themselves to their external environment. It is hoped that doing so will provide insight into how this sector grew while receiving less financial support, as well as providing social workers with more insight on how they can help NPOs survive in difficult financial situations (Brown et al., 2013). Providing this insight can either reshape some of the assumptions educators and policy-makers have on how NPOs manage their finances in times of economic turmoil, or it can verify that these assumptions are correct after all. An important thing to consider, however, is if NPOs did operate in a *Placid*



*Randomization Environment*, then it is likely that they had to make choices that promoted their survival (i.e., building financial reserves), rather than choices that were more conducive to helping clients. This type of behavior seems justified, given the situation they were in, because they would allow NPOs to continue offering services (though at a lower rate), rather than discontinuing services altogether. Based on the literature review used in this study, the following methodology will offer four possible situations to describe how NPOs behaved when their revenue began to change, to see if they did in fact behave this way (i.e., more in accordance with their for-profit counterparts).

The following methodology chapter describes how NPOs' profit was affected during the great recession. This next chapter, additionally, defines *ChangeRate in Revenue* from 2009 to 2010 in NPOs as this study's Independent Variable (IV) to clarify how change in these years will be measured.

## CHAPTER III

### METHODOLOGY

This study does not predict. It is a descriptive study that used longitudinal data to see how NPOs' profit was affected when their revenue fluctuated during the Great Recession, looking specifically at the peak years from 2009 to 2010. The selection criteria for the sample were NPOs whose assets were between \$500,000 and \$100,000,000. The study's sample consisted of 150 private nonprofit foundations whose assets were in this range. These private foundations were selected because their purpose is to financially support the service offerings of NPOs (Tuckman & Chang, 1991). Since these foundations award NPOs grants to continue offering the same level of services each year, they are in the best position to choose what is more important: accumulating profit, or generating services. This study's research questions are 1) did NPOs experience an increase or a decrease in Revenue during this time; and 2) did NPOs allocate more money toward accumulating profit than to Service Expenses?

#### **Measure**

In order to give an accurate measurement of the change in each private nonprofit foundation's Revenue, Service Expenses, Financial Reserves, and Profit/Debt, this study examined the Change-Rate for each of these variables. The median Change-Rate was chosen as the most accurate way to measure the change in these variables because it described the individual change each private nonprofit foundation made from 2009 to

2010, rather than looking at how the entire sample of private nonprofit foundations changed as a whole, which could be misleading. The mathematical formula used in SPSS to calculate ChangeRate in each variable was.

$$[(\text{Value at end of 2010} - \text{Value at end of 2009}) / \text{Value at end of 2009}] \times 100\%$$

### **ChangeRate in Revenue**

This study's Independent Variable (IV), *Change in Revenue*, was measured by first entering line 12 for each year of the IRS 990 Form into an excel spread-sheet and then subtracting year 2009 from 2010 to find the change. Line 12 of the IRS 990 Form represents total revenue. This difference in revenue between years 2009 and 2010 indicates whether the NPO's revenue increased or decreased. *ChangeRate in Revenue* was calculated by dividing *Change in Revenue* by *Revenue 2009*. The resulting decimal percentage indicates how much *Revenue* increased or decrease from 2009 and is expressed as a positive or negative number.

### **ChangeRate in Service Expenses**

This is one of three Dependent Variables (DV). *Service Expenses Change* was measured by total expenses, listed on line 18 of IRS 990 Form, and was calculated the same way as the IV; this way of calculation went for the rest of this study's DVs. *ChangeRate in Service Expenses* was calculated by dividing *Service Expenses Change* by *Service Expenses 2009*. The resulting number represents in a decimal form how much *Service Expenses* increased or decreased, depending on whether the resulting number is negative or positive. It should be remembered IRS 990 Forms do not include any value that is a direct measure of actual spending on Service Expenses. As suggested in the literature (Greenlee & Trussel, 2000), using line 18 of the IRS 990 Form is nevertheless

the best way to gain an accurate understanding of what NPOs spent on services. Line 18 is comprised of everything that is spent on services and administration costs.

### **ChangeRate in Profit/Debt**

In order to measure this DV, *Profit/Debt 2009* and *Profit/Debt 2010* were calculated by using line 22 of IRS 990 Form for the corresponding year. This is what is left over after total expenses and liabilities are taken into consideration. If the number that is left over is positive, the NPO has no Debt. If this number is negative, the NPO has no Profit. *Profit/Debt Change* was calculated by subtracting *Profit/Debt 2009* from *Profit/Debt 2010*. A negative number suggests an increase in the leftover and a positive number suggests a decrease. Finally, *ChangeRate in Profit/Debt* was calculated by dividing *Profit/debt Change* by *Profit/Debt 2009*. The value in this DV indicates how much percentage the leftover increased (i.e., positive value) or decreased (i.e., negative value) compared to the previous year.

### **Financial reserves**

The term financial reserves refers to how well revenue can be used to pay service expenses, and is expressed as a percentage. NPOs whose percentage is closer to 1 will be more able to use their revenue to pay their service expenses. Tuckman and Chang (1991) invented four financial ratios to create this percentage. This study chose to use two of Tuckman and Chang's ratios to determine how much cash an NPO has in its Financial Reserves, which means these two ratios will be listed separately. The two ratios that define Financial Reserves for this study were Equity Balance: Subtracting liabilities from Assets (restricted/unrestricted accounts and liquid cash), and then dividing by total Revenue:  $(\text{Assets} - \text{Liabilities}) / \text{Total Revenue}$ , and Operating Margins: Subtracting

expenditures from revenues, and then dividing by revenues  $(\text{Revenues} - \text{Expenses}) = \text{Total Surplus/Revenue}$ . These two financial ratios clearly depict the amount of revenue NPOs have available in *Revenue* to pay total expenses and liabilities, but they do not measure what Profit NPOs have available to put toward total expenses. The previously mentioned spread-sheet used these two ratio analyses formulas to recreate the financial reserves for each year. The change in each financial reserve will be measured by first subtracting the 2009 financial reserve from the 2010 financial reserve. The *ChangeRate in 'financial reserves'* is again calculated by dividing *financial reserve Change* by financial reserve 2009. The remaining decimal value indicates if the DV increased or decreased.

### **Data Collection**

The list of private nonprofit foundations used for this study was provided at no cost by an Abilene Christian University (ACU) library researcher. The search terms used to obtain this data were nonprofits; charitable giving; foundations; and assets between \$500,000 and \$100,000,000. This study's sample came from the Foundation Center database. Again, data was entered manually into an excel spread-sheet and then uploaded to SPSS. To reduce the likelihood of data entry error, several IRS 990 Forms were chosen at random to verify this information was correctly entered.

### **Data Analysis**

Correlation analyses were conducted on the data to see the bivariate correlations between the IV and the DV, using Pearson's  $r$  and Spearman's  $\rho$ . This study considers these correlations to be associations, so as not to confuse with the word correlation with the word causation. The following chapter displays this study's results.

## CHAPTER IV

### RESULTS

This chapter displays the results of what happened in this study's sample of private nonprofit foundations when their Revenue fluctuated. The main purpose of displaying these results was to 1) see if these NPOs' Revenue increased at a time when their Revenue sources were unstable; and 2) to see if it did increase, would more Revenue be allocated toward accumulating Profit than generating Services? This chapter answered these questions by 1) displaying the descriptive features of the 150 private nonprofit foundations; 2) displaying the statistical findings of these foundations; and 3) displaying the associations between the IV and the DV. All this is not only to answer the two research questions; it is to gain insight into how financial management was conducted in NPOs. The next chapter discusses these results, their implications, and this study's limitations.

#### **Descriptive Features**

Table 4 provided the descriptive features of the 150 private nonprofit foundations, breaking them down into asset size, category of services, and location in America. This represents the kind of private nonprofit foundations this study looked at. Accordingly, 91 NPOs (60.7%) had between \$1,000,000 and \$100,000,000; 59 NPOs (39.2%) had assets between \$500,000 and \$1,000,000. 78 NPOs (52.0%) provided Education services; 26 NPOs (17.3%) provided Human Services; 16 NPOs (10.7%) provided Art services; 14

NPOs (9.3%) provided Grants services; 3 NPOs (2.0%) provided Religious services; and 1 NPO provided Environmental services (0.7%). 57 NPOs (38.0%) were located in the NorthEast; 29 NPOs (19.3%) were located in the MidWest; 23 NPOs (15.3%) were located in the SouthEast; 23 NPOs (15.3%) were located in the West; and 18 NPOs (12.0%) were located in the SouthWest. In sum, most NPOs made between \$1,000,000 and \$100,000,000, provided Education services, and came from the North East part of America.

Table 4

*Descriptive Features of NPOs*

<b>Variable</b>	<b>Category</b>	<b>N</b>	<b>%</b>
Asset size	\$1,00,0000 – \$100,000,00	91	60.7%
	\$500,000 – \$1,000,000	59	39.2%
Category of Services	Education	78	52.0%
	Human Service	26	17.3%
	Art	16	10.7%
	Grants	14	9.3%
	Health	12	8.0%
	Religious	3	2.0%
	Environmental	1	0.7%
Location In America	NorthEast	57	38.0%
	MidWest	29	19.3%
	SouthEast	23	15.3%
	West	23	15.3%
	SouthWest	18	12.0%

## Statistical Findings

The statistical findings of each major variable was provided to give researchers an idea of the financial shape the NPOs were in and to display how their financial situation changed from 2009 to 2010. For reasons described in the previous chapter, this study used the median ChangeRate (located in the third column of the bottom row of each major variable's table) to describe each IV and DV. The median ChangeRate for each major variable was multiplied by 100% to get the proper percent change. A histogram was provided to give a visual representation of how the variables were distributed from 2009 to 2010; this was to see if there was a normal or nonnormal distribution.

To answer the question did revenue increase or decrease, the IV Revenue was calculated by SPSS. The results of this calculation, as displayed by the ChangeRate in Table 5 and Figure 1, indicated a nonnormal distribution in the IV *ChangeRate in Revenue*. The distribution was nonnormal because the Skewness (SKW) was low (6.35), and the Kurtosis (KOR) was high (46.22). Therefore, the most accurate way to see how much Revenue changed was to look at the median ChangeRate, which was .56. Looking at the mean would be misleading, as doing so assumes the variable was normally distributed. Likewise, looking at the RevChange is also misleading because it also looks at the sample as a whole, which would allow the outliers to misrepresent what the actual change was. Multiplying the median ChangeRate by 100% answered the question by indicating Revenue increased 56% from 2009 to 2010.

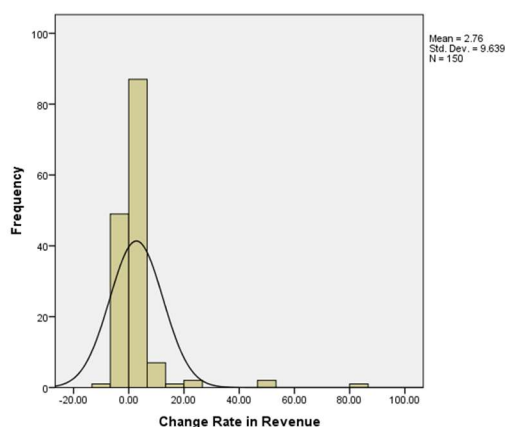


Table 5

*Descriptive Statistics of Major Variable: Revenue 2009/2010*

	Min	Max	Median	IQR	Mean	SK	KO
<i>Revenue 2009</i>	-\$10568K	\$57840K	\$111K	\$3529K	\$2616K	4.32	25.4
<i>Revenue 2010</i>	-\$9749K	\$59002K	\$1542K	\$5254K	\$4404K	3.71	17.9
<i>Revenue Change</i>	-\$48638K	\$43100K	\$149K	\$3101K	\$1787K	-0.39	15.1
<i>ChangeRate in Revenue</i>	-803%	8626%	56%	234%	276%	6.35	46.22

Min: Minimum Value, Max: Maximum Value, IQR: Interquartile Range, SK: Skewness, KO: Kurtosis



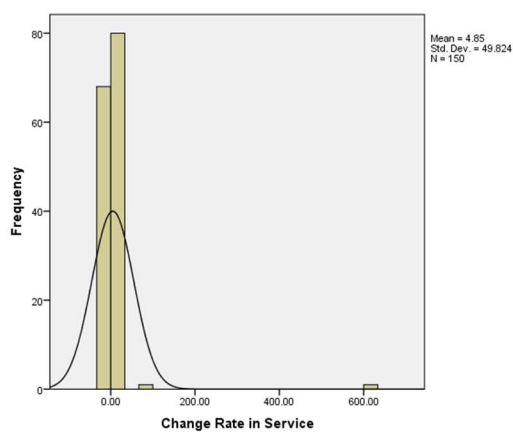
*Figure 1.* Median ChangeRate in RevenueTable 6 displays the descriptive statistics and the histogram of the DV: *ChangeRate in Service Expenses 2009/2010*. To answer the question did services increase or decrease when revenue fluctuated, the DV Service Expenses was calculated by SPSS, which showed a nonnormal distribution. Again, because SKW was 11.9, and the KOR was 143.8, looking at the median ChangeRate, and multiplying it by 100%, answered the question. Service Expenses increased by 1.4% when revenue fluctuated.

Table 6

*Descriptive Statistics of Major Variable: Service Expenses 2009/2010 (SE)*

	Min	Max	Median	IQR	Mean	SK	KO
<i>SE2009</i>	-\$4042K	\$42359K	\$1606K	\$4683K	\$3188K	4.034	25.4
<i>SE2010</i>	-\$41K	\$35372K	\$2513K	\$4753K	\$3437K	3.29	16.1
<i>SE Change</i>	-\$6987K	\$9575K	\$1K	\$443K	\$248K	1.518	15.5
<i>ChangeRate in SE</i>	-2.26%	604.7%	1.4%	38%	485%	11.9	144

Min: Minimum Value, Max: Maximum Value, IQR: Interquartile Range, SK: Skewness, KO: Kurtosis



*Figure 2. Median ChangeRate in Service Expenses.*

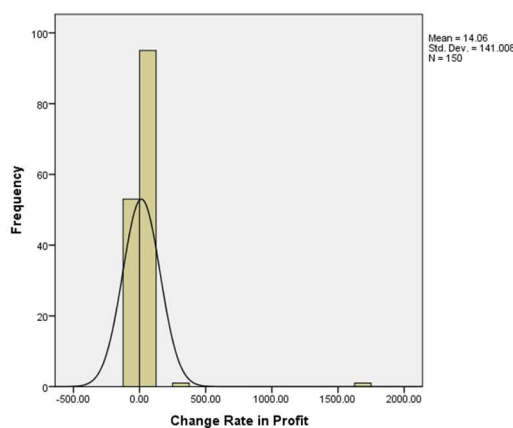
To answer the question did profit or debt increase when revenue fluctuated, the DV Profit/Debt was calculated by SPSS, which showed a nonnormal distribution. SKW was 11.73, and KOR was 140.81. Therefore, multiplying the median ChangeRate by 100% answered the question. Since this was a positive number, Profit increased 43% when revenue fluctuated. For it to have been a decrease in Profit, the median ChangeRate would have to have been negative. Table 7 displays the descriptive statistics and the histogram of the dependent variable: *ChangeRate in Profit/Debt 2009/2010*.

Table 7

*Descriptive statistics of major variable: Profit/Debt 2009/2010*

	Min	Max	Median	IQR	Mean	SK	KO
<i>Profit/Debt 2009</i>	-\$52928K	\$44514K	-\$73K	\$2269K	-\$610K	0.59	22.76
<i>Profit/Debt 2010</i>	-	\$150485K	-\$18K	\$142K	\$1863K	7.86	83.41
<i>Profit/Debt Change</i>	-\$49627K	\$160288K	\$95K	\$2608K	\$2473K	6.74	71.14
<i>ChangeRate in Profit/Debt</i>	-6596%	170294%	43%	163%	1406%	11.73	140.8

Min: Minimum Value, Max: Maximum Value, IQR: Interquartile Range, SK: Skewness, KO: Kurtosis



*Figure 3. Median ChangeRate in Profit/Debt.*

To answer the question did the financial reserve operational margin increase or decrease when revenue fluctuated, the DV Operational Margin was calculated by SPSS, which showed a nonnormal distribution. SKW was -2.72, and KOR was 69.54.

Therefore, using the median ChangeRate, and multiplying it by 100%, answered the question. The DV Operational Margin decreased by -15% when revenue fluctuated.

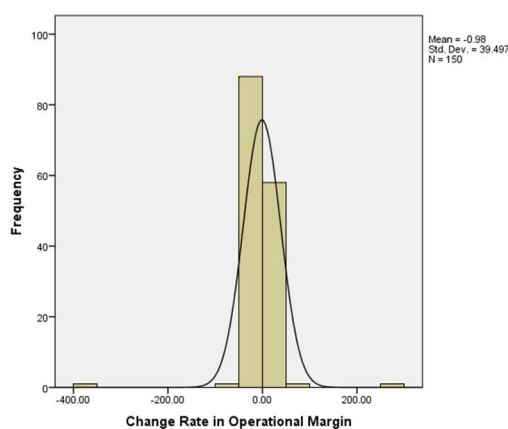
Table 8 displays the descriptive statistics and the histogram of the DV: *ChangeRate in Operational Margin*.

Table 8

*Descriptive Statistics of major variable: Operational Margin 2009/2010 (OM)*

	Min	Max	Median	IQR	Mean	SK	KO
<i>OM2009</i>	-21.30	74.55	0.14	2.42	0.65	6.71	65.54
<i>OM2010</i>	-65.94	68.57	-0.04	1.39	-0.75	0.37	55.56
<i>OM Change</i>	-74.97	40.36	-0.16	2.39	-1.40	-4.37	34.8
<i>ChangeRate in OM</i>	-368%	290%	-15%	1.99%	-0.98	-2.72	69.54

Min: Minimum Value, Max: Maximum Value, IQR: Interquartile Range, SK: Skewness, KO: Kurtosis



*Figure 4. Median ChangeRate in Operational Margin.*

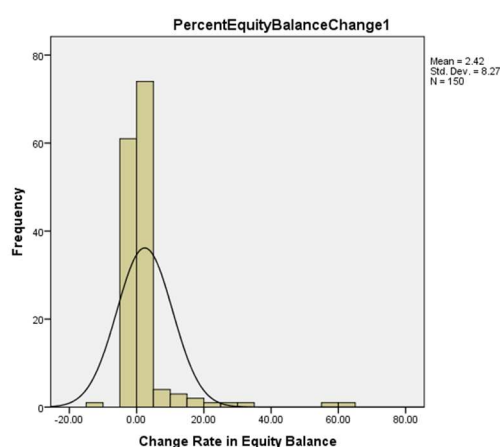
To answer the question did the financial reserve equity balance increase or decrease when revenue fluctuated, the DV Equity Balance was calculated by SPSS, which showed a nonnormal distribution. SKW was 5.09; and the KOR was 30.15. The question was answered by multiplying the median ChangeRate by 100%. The DV Equity Balance increased 24% when revenue fluctuated. Table 9 displays the descriptive statistics and the histogram of the dependent variable: *ChangeRate in Equity Balance 2009/2010*.

Table 9

*Descriptive statistics of major variable: Equity Balance 2009/2010 (EB)*

	Min	Max	Median	IQR	Mean	SK	KO
<i>EB 2009</i>	-829.21	512.61	11.48	38.56	14.54	-2.96	34.96
<i>EB 2010</i>	-190.09	511.02	20.50	27.51	34.84	4.01	23.70
<i>EB Change</i>	-267.48	846.33	1.95	36.95	20.30	4.07	29.45
<i>ChangeRate in EB</i>	-11.24%	60.95%	24%	1.98%	2.42%	2.42	30.15

Min: Minimum Value, Max: Maximum Value, IQR: Interquartile Range, SK: Skewness, KO: Kurtosis



*Figure 5. Median ChangeRate in Equity Balance.*

### Associations

Descriptive statistics indicated Revenue increased 56%, Profit increased 43%, Services increased 1.4%, Operational Margin decreased -15%, and Equity Balance increased 24%. Association tests were run to see the associations between the IV and the DVs. These tests did not show an increase in Revenue caused an increase in Profit; they only showed what the association is between the variables. Because the distribution of the variables included in the association analyses were not normally distributed, this study examined each associations using two different coefficients: a Spearman's rho and a Pearson's r. The Spearman's rho test rank ordered the variables to account for the

nonnormal distribution, while the Pearson's  $r$  tested for associations as a whole. Of note, though the Pearson's  $r$  displays what actually happened because it does not account for the nonnormal distribution, a Spearman's rho more accurately displays the associations between the variables.

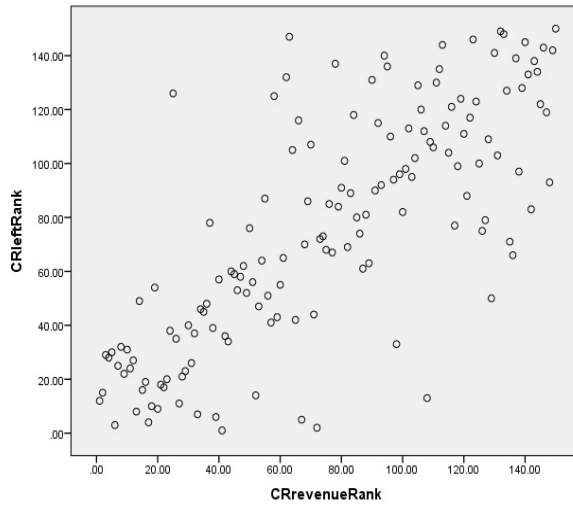
Table 10 displays the results of these two association tests. The Spearman's rho showed a positive moderate association (.756) between 1) Revenue and Profit; 2) a positive weak association between Revenue and Operational Margin (.357); and 3) a negative weak association between Revenue and Equity Balance. All three of these associations were statistically significant. There was no associations between the IV and Service Expenses for both tests, nor was there an association between the IV and any of the DVs using the Pearsons'  $r$ . Looking at the sample as a whole, therefore, indicated Revenue increased, but it did not indicate an association between Revenue and the other DVs. However, using the Spearman's rho to account for the nonnormal distribution indicated there was an association between Revenue, Profit, and the two Financial Reserves, but it did not indicate an association between Revenue and Service Expenses.

Table 10

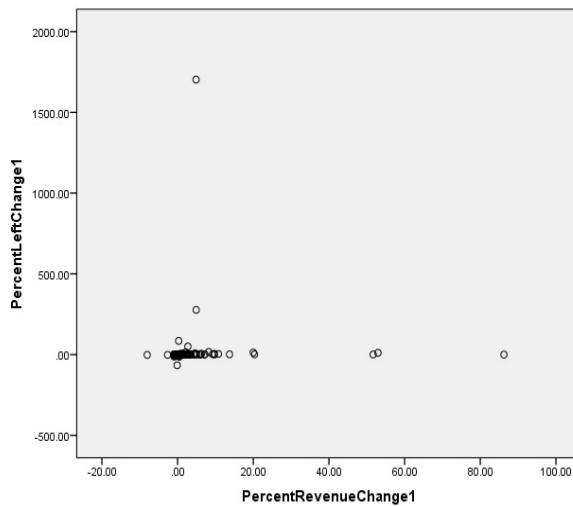
*Associations between IV and DV using Spearman's rho and Pearson's r*

	Change in Revenue	
	Spearman's rho	Pearson's r
Change in Service Expenses	.026	0.078
Change in Operational Margin	.357**	0.044
Change in Equity Balance	-.309*	-0.097
Change in Profit	.756**	0.027

For clarification, Figure 6 showed the statistical significance in the positive association between Revenue and Profit. Figure 7 displayed the results of the Pearson's  $r$  between the same variables, indicating that as a whole there is no association between Revenue and Profit.



*Figure 6.* Spearman's rho Association between Revenue and Profit.



*Figure 7.* Pearson's  $r$  Association between Revenue and Profit.

## Summary

To summarize this chapter's results, most NPOs came from the North East part of America, offered Educational Services, and had between \$1,000,000 and \$100,000,000 in assets. Individually, or for each NPO, Revenue increased 56%, Service Expenses only increased 1.4%, *Profit* increased 43%; Operational Margin decreased -15%, and Equity Balance increased 24%. Overall, Revenue did not decrease. This study's research questions were 1) did Revenue increase for these NPOs during the recession years from 2009 to 2010; and 2) did NPOs allocate more Revenue toward accumulating Profit than toward generating Service Expenses. The results answered these two research questions by indicating Revenue increased, and more of it was allocated toward Profit than toward Service Expenses. The most interesting finding was, when using a Spearman's rho, a moderate positive and statistically significant association (.756) occurred between Revenue and Profit, but no association occurred between Revenue and Services when using the same test. There was not an association between any of the variables when looking at the sample as a whole, using a Pearson's r. The association instead occurred by rank ordering the NPOs, which indicates that, individually, each NPO mainly allocated more Revenue toward accumulating Profit. However, this study only looked at the associations between the IV and the DVs; it did not establish a causal relationship between these variables. There is an association between most of the variables. The next chapter discusses what these statistical findings and associations mean and what support they provide for the various authors' arguments, as they were discussed in the literature review.



CHAPTER V  
DISCUSSION, LIMITATIONS, IMPLICATIONS

**Discussion**

The overall results of this study indicated the NPOs allocated more Revenue toward accumulating Profit than toward generating Services, thereby providing empirical support for Calabrese (2012) and Ramirez's (2011) general argument that, over time, NPOs mainly accumulate Profit. Thus, the first research question, whether revenue increased for NPOs during this time in history, was affirmed, as well as the second research question regarding the relationship between Revenue and Profit. What is interesting to consider, though, is the results also indicated NPOs maintained the same level of Services regardless of the circumstances, even when their Profit increased. It would seem private nonprofit foundations maintained the same level of Services, despite having the financial capacity to generate more Services. This was surprising because the literature suggested that by 2009 the need for Services was increasing (Brown et al., 2013). For example, more people needed education to secure better jobs at this time in America's history and so would need these private nonprofit foundations to help accommodate them (Brown et al., 2013).

Explaining why this did not happen is beyond the scope of this study, but it was suggested in the literature (by Brown et al., 2013) that perhaps these NPOs needed to accumulate Profit because their external environment was unstable? Based on this study's

findings, this suggestion seems unlikely. It was Brown et al. (2013), after all, who found the nonprofit sector mainly, grew during the recession, and this finding is in-line with research by Calabrese (2012), and Ramirez (2011). This study supports the idea that NPOs at this time were receiving more Revenue and using it to increase their Profit by only slightly increasing services when their revenue increased. However, because the nonprofit business was booming at a time when more services were needed, this study raised issues of social justice in how finances are sometimes managed in NPOs. For example, if Services were not generated because these NPOs wanted to continue profiting, then they should not be tax-exempt; otherwise, they are using their 501 © status to accumulate profit.

As discussed in the introduction, as long as NPOs do not make more than three times the amount needed to pay total Service Expenses, they can be tax-exempt and receive an A or A- rating (Give.org, n.d.; IRS, n.d.). While there is no legal reason why NPOs cannot accumulate more profit than generate services, because doing so is nevertheless contrary to what it means to be a nonprofit, it can be questioned at what point should profiting NPOs be tax-exempt. This is an issue further research can clarify.

Contrary to what was expected in the literature review, this study found NPOs generally maintained the same level of Services, despite their revenue increasing, and that they probably allocated more Revenue toward increasing Profit than they will toward increasing service expenses. The moderate association between the variables Profit and Revenue suggests these NPOs' financial behavior might be explained by positive revenue fluctuation. This is interesting. It supports Tuckman and Chang's (1991) initial implication that NPOs will do all they can to maintain the same level of Services, but it

does not support the argument that over time an NPO's Profit will grow in proportion to its Services. Profit, after all, increased by 43%, which is about 28 times more than the increase in Service Expenses ( $43\% / 1.4\% = 28$ ).

The Spearman's association coefficient between ChangeRate in Revenue and ChangeRate in Operational Margin was positive and weak, statistically significant, but it decreased by -15%. This means as Revenue increased the Operational Margin decreased, which at first seems confusing, because if revenue increased then the NPOs' ability to pay Services should also increase. The Operational Margin, after all, displays a percentage of how well revenue can pay Service Expenses. Since this percentage decreased, the NPOs' ability to pay Service Expenses was reduced, even though there was an association between revenue and the Operational Margin. A possible explanation is even though some Revenue was allocated toward Service Expenses, which explains why there is a positive weak association between Revenue and Operational Margin, the Operational Margin is still -15% less than the previous year. More likely, though, an increase in Revenue does not indicate an NPO's ability to pay its Service Expenses will increase.

Equity Balance, as pointed out earlier, uses an NPO's assets to calculate its ability to pay liabilities. Though Equity Balance increased 24%, there was a negative association between it and Revenue, which suggested as Revenue increased the Equity Balance should have decreased. Because the Equity Balance increased, it is likely that the Equity Balance is not explained by revenue fluctuation. Again, just because Revenue increases, that does not mean a NPO's ability to pay its liabilities will be affected. Financial

Reserves, after all, do not take into consideration an NPO's Profit, which may be what NPOs use to generate Service Expenses.

### **Were NPOs in a Placid Randomization Environment?**

The reason NPOs in this study accumulated Profit more than they worked toward generated Services was to be explained by their being in a *Placid Randomization Environment*, where in order to survive they had to take extreme measure (i.e., cut services to keep their profit) (Emery & Trist, 1962). The assumption is if the NPOs did not take such drastic measures, they may be forced to shut their doors, permanently (Brown et al., 2013). Using this explanation to understand why NPOs in this study's sample does not seem logical. For instance, were it true, how could they be a *Placid Randomization Environment* if overall they were able to increase their profit more than their service expenses? It seems more likely these NPOs were in an environment where they could predict what was about to happen in regards to their funding and so were comfortable with increasing their Profit, and keeping their Services the same.

The kind of environment these NPOs were in which would have allowed them to predict what their revenue source might do is better defined as a *Placid Cluster Environment* (Emery & Trist, 1962). As said in the literature review, this is an environment that is relatively stable; the NPO can make predictions on where and how much funding will come in each year, as well as how much should be allocated toward Profit (Emery & Trist, 1963). When considering so much more could have been spent on Services, it could be argued demands for Services did not increase very much from 2009 to 2010 for this population sample. This does not seem likely. It was found the need for Services has always increased (Brown et al., 2013). This again supports the notion that

these NPOs operated in an environment in which there was a stable demand for Services, and Revenue sources were reliable—enough to create Profit.

To answer the question why did they not generate more Services, it could be the demand for services never increased that much, thereby allowing them to instead accumulate more Profit. It make more sense to attribute the steady demand for Service Expenses, and the increase in profit, to a *Placid Cluster Environment*, as was implied by the Urban Institute report, which indicated the nonprofit sector grew by 8.6% from 2002 to 2012 (Brown et al., 2013; McKeever & Pettijohn, 2014; Ramirez, 2011). What is more, if the environment these NPOs operated in was truly random, as it would have to be to be a true *Placid Randomization Environment*, why does it seem relatively easy to predict what they are going to do, based on how their revenue fluctuates? The answer is probably because the environment they operated in is not as random as it may have seemed. Therefore, this study supports the argument that NPOs were not in as an extreme environment as it would have seemed they were in (Brown et al., 2013).

### **Limitations**

A major limitation in this study is researcher bias toward thinking NPOs with assets between \$500,000 and \$1,000,000 are generally focused on accumulating profit, as opposed to generating services. It is simply not always the case that such NPOs are focused on accumulating Profit; in fact, their assets might be at this level because they are more focused on generating services than accumulating Profit. However, even though the NPOs for this study were selected at random (the only search criteria were nonprofits; charitable giving; foundations; and assets between \$500,000 and \$100,000,000), the study found NPOs mainly accumulated Profit.

Another limitation is it is not logical to argue line 18, total expenses, on the IRS 990 Form accurately represents Service Expenses because total expenses include more than what is spent on Service Expenses. However, since Services did not increase nearly as much as Profit did, it can be argued that service offerings also did not increase as much. A limitation of this study is because 18 on the IRS 990 Forms, which is where the data on service expenses was collected from, lists together what is spent on Services and administration cost, there is no way of knowing how much exactly was spent on Services, as opposed to administrative and overhead cost. Without knowing how much was spent on Services, as opposed to non-service costs, the argument that NPOs were more interested in accumulating Profit is incomplete. Service Expenses could have increased, and non-service expenses decreased, while Total Spending remained unchanged. Future studies could talk with each NPO's financial department to get an itemized list of what was spent on Services; however, accomplishing such a project would be time consuming, expensive, and labor intensive. IRS 990 Forms are not entirely representative, but since they do give a fairly accurate description of an NPO's financial behavior, researchers can make fairly accurate arguments based on them.

A third limitation of this study is how representative is this study's population sample to the nonprofit sector as a whole? It must be remembered that since private foundations were used for this study's sample, the NPOs used in this study received funding from private individuals, unlike public NPOs who receive funding from government sources. As such, because private foundations typically carry less in total liabilities (total liabilities are the amount an NPO owes to another organization/entity (Bowman, 2011)), they should have more leeway in how they choose to spend their

finances. It would be expected they are the ones who are able to give more because they have fewer total liabilities, whereas public NPOs are more constrained in how much they can spend due their having higher total liabilities. If this constraint separates public from private NPOs, it may make this study's sample less representative of the nonprofit sector as a whole. The private foundations seem to have gathered Profit, and distributed it in small amounts.

This study's fourth limitation is since only correlations were made between the independent and dependent variables, it would be illogical to conclude, based on this study's results, that Revenue fluctuations cause Change in Profit/Debt, regardless of how strong the correlation is. This study nevertheless provides a first step future researchers can use toward determining revenue fluctuation directly affects Change in Profit/Debt. Areas future studies can investigate are revenue fluctuation in public NPOs; the relationship between service increase and Profit margin; and whether Profit is associated with NPOs eventually shutting down. A major strength of this study is it shows NPOs better serve their communities by focusing on Profit accumulation.

### **Implications for Practice, Research, and Education**

In-line with the profit-building argument presented in this study's introduction, there is nothing inherently wrong with the Profit this study's NPOs accumulated, so long as they did not accumulate more than three times the amount of Profit needed to sustain themselves (Give.org, n.d.; IRS, n.d.). An implication of this study for future research to study, then, is how much Profit are NPOs making, and is this amount within the regulations guidelines set by charity watchdogs? For this study, the amount of Profit NPOs made was much more that the amount they allocated toward Services, when

looking at the differences between both IV and DVs. This implies some of these NPOs may have been in violation of charity watchdog regulations. The results imply Profit seeking behavior on the part of NPOs more than behavior conducive to generating additional Services. The implication for social workers is the difference between nonprofit and for-profit management is not as different in some aspects as what might be expected, and this is also supported by Calabrese (2010), and Ramirez (2011).

The main difference this study found is NPOs seemed to be willing to maintain the same level of Services, even if their Operational Margin decreases, which is an implication for social work practice. Social workers should, therefore, also take into consideration the notion that NPOs may be willing to take financial risk to continue offering Services and pay expenses. The suggestion is NPOs may be willing to drain their Profit in order to maintain the same level of services. A social worker working at the macro-level can therefore use this study to argue NPOs will maintain a certain level of Service. Social workers can expect there to be difficult times, but this study provided support for the notion that NPOs are very concerned about maintaining the same level of Service—but not so much in increasing their services. An additional implication for future research is whether NPOs that choose to go into debt to maintain the same level of Services end up closing their doors. This study provides a foundation for such research to be conducted.

Future studies could also see if over time the nonprofit sector increased its Service offerings (Tuckman & Chang, 1991) in proportion to the amount of Profit it accumulates. This study did not find support for this argument. As suggested in the previous limitation section, this may be because this study's population sample consists of private nonprofit



foundations and that these foundations are more geared toward accumulating Profit than public NPOs. If this is so, a major implication of this study for social work policy is private foundations may operate differently than public policies, and so may need a different set of regulations.

### **Relevancy of this Study to Social Work Practice**

A likely reason why studies like this have received little attention in the literature is it seems uncharacteristic, at least to the social work profession, of NPOs to hold their finances instead of using them to continue providing or increasing their Services (Calabrese, n.d.). Another goal of this study, therefore, is to broaden social workers' understanding of how NPOs sometimes manage their finances. Overall, this study is to help social workers realize that when they go into their respective field they may need to consider ways to help NPOs avoid financial disaster. As such, without a basic understanding of how to do this, social work practitioners may be unprepared to deal with unexpected financial depreciations or be uncertain on whether or not their NPO is in a position to continue offering the same level of Services. This is especially pertinent when considering the nonprofit sector social workers work in comprises a significant part of the economy, and that if not properly managed, it could lead to fewer jobs being available to social workers (McKeever & Pettijohn, 2014). This larger environment can significantly affect social workers.

Social work practitioners must, therefore, address these financial problems because they are charged with understanding how a client's larger, external environment affects their clients, which means eventually they must also understand how the external environment affects their organization (Blalack, 2016; Sontag-Padilla et al., 2012).

Nevertheless, the general misconception that social work practitioners do not need to understand how to manage finances seems irrelevant, or unrelated, to helping them meet human needs, such as anxiety, depression, substance abuse, etc. (Blalack, 2016; Sontag-Padilla et al., 2012). This is simply not true. In order for social workers to provide meaningful/effective services, they must understand that an NPO's financial position directly affects their ability to help solve these human problems (Blalack, 2016; Sontag-Padilla et al., 2012). What is more, because of the diversity of their educational training, social workers are often expected to move into managerial roles in which decisions are made over the allocation of finances (e.g., they may be asked what to do in case Revenue starts depreciating) (Blalack, 2016; Sontag-Padilla et al., 2012).

The main reason why an understanding of financial management is indispensable to a social worker's education, then, is social workers are responsible for understanding how it relates to a client's (or organization's) well-being (Prentice, 2015). It is often the case, for example, that the common denominator among many clients suffering from mental illnesses is they come from low-economic social classes (Jansson, 2009) and that social workers often spend a significant amount of time finding financial resources for them before they can start addressing their more complex needs (Johnsen & Teixeira, 2012). In the same way, social workers must be prepared when moving into managerial roles to make financial decisions that affect their NPOs' interaction with its external environment or else they will be ineffective as practitioners (Prentice, 2015). This study provides social workers with additional information to understand what to do when faced with tough financial decisions.

### **Importance of this Study for Social Work Education**

The importance of this study lies in preparing social workers for the types of management decisions they most likely will encounter throughout their careers, as well as demonstrating what types of situations might bring about these decisions. This can be significant for social work educators, and policy writers, as augmenting our knowledge of what NPOs sometimes have to do to continue offering Services may very well change some of the ways management is taught in social work graduate programs. For example, instead of viewing, or teaching, that NPOs manage their finances in a way that is drastically different than their for-profit counterparts, this study showed NPOs and for-profits manage their finances more similarly than educators and policy writer may believe (IRS, n.d.), at least when faced with revenue depreciation during uncertain financial times.

What is normally taught in social work management classes, and implied in policies regarding 501 (c) (3) stipulations, though, is NPOs have a different mindset when managing their finances (Charity Navigator, 2016; Give.org). However, thinking this way can ignore the fact that NPOs can make the same financial decisions as for-profit organizations and that sometimes they must make these kinds of decisions. Thinking NPOs are different, because of the populations they serve, may be a way of overlooking some of the similarities between the two. This study is import because it seeks to verify whether or not this is a misconception. If it is, then it is quite possible that additional views on financial management in NPOs should be considered when teaching social work students basic management skills. If it is not, then this study can be used to verify, or even strengthen, the normal conception researchers have toward financial

management in NPOs. In either case, examining this gap in the literature will provide useful information for researchers on both sides of the argument to examine.

## CHAPTER VI

### CONCLUSION

This study sought to answer the questions: 1) did Revenue increase or decrease for NPOs during the Great Recession from 2009 to 2010; 2) and did NPOs during this time allocate more Revenue toward accumulating Profit than toward generating Services? It was found that little research had been done on the subject of Profit accumulation in NPOs (Calabrese, 2012); however, the literature suggested a time when NPOs may have accumulated Profit was during the great recession. Consistent with the literature, this study found NPOs allocated more revenue toward accumulating Profit than they did toward increasing Services from 2009 to 2010. Profit increased enough that future research could study to see if NPOs are making more Profit than what charity watchdogs permit them to make. It was also found that there are IRS regulations on how much profit NPOs can make. The most important implication was NPOs serve their communities best by focusing more on accumulating Profit than on generating Services.

Contrary to what was expected, this study also found NPOs most likely operated in a *Placid Cluster Environment*. One where that allowed them to all consistently increase their Profit. This study concludes, therefore, on the idea that over time, NPOs will continue growing and increasing their Profit. As Nietzsche (trans. 1992) would say, just because accumulating Profit in NPOs seems counter to what is normally expected—that does not necessarily mean what they are doing is evil.

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APENDIX A

IRB Approval Letter

**ABILENE CHRISTIAN UNIVERSITY**  
*Educating Students for Christian Service and Leadership Throughout the World*

Office of Research and Sponsored Programs  
225 Martin Administration Building, ACU Box 28103, Abilene, Texas 79698-9103  
319-674-3885



16-106

Joshua James Hunter  
Department of Social Work  
ACU Box #27866  
Abilene Christian University

Dear Mr. Hunter

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled Revenue Depreciation in Nonprofit Human Services Organizations

(IRB# 16-106 ) is exempt from review under Federal Policy for the Protection of Human Subjects as:

- Non-research (45 CFR 46.102(d))
- Non-human research (45 CFR 46.102(f))

Based on:

Data are public data about nonprofit organizations, not individuals.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

*Megan Roth*

Megan Roth, Ph.D.  
Director of Research and Sponsored Programs