CASH MANAGEMENT IN THE RELIGIOUS NON-PROFIT SECTOR:
A SURVEY OF THREE MAJOR DENOMINATIONS' PRACTICES

by

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(ABSTRACT)

Cash management is a process for controlling the flow of money into and out of an organization for the purpose of optimizing its financial position. The benefits of cash management - a more complete understanding of financial standing, a stronger financial position, and an improved ability to plan and fund activities and expenditures - are just as relevant to the non-profit organization as to its government or business counterpart. This study explores the extent to which this argument is valid within a sample of religiously affiliated non-profit organizations by identifying and evaluating the patterns of cash management techniques they use.

This research demonstrates that part of the religious non-profit subsector employs a variety of cash management techniques ranging from simply depositing incoming money daily to preparing cash budgets and investing surplus funds. On the whole, however, this use is not very sophisticated. Nevertheless, significant sophistication differences between denominations indicate that while there are no inherent subsector structural barriers to cash management implementation, implementation is related to other factors including the type of accounting system used and the size of the organization's budget.

This thesis also develops an index that reflects the relative sophistication of cash management implementation in the organizations studied. The index reflects categories of cash management techniques culled from the literature while for the first time weighting those tools based on their relative level of implementation difficulty and sophistication. This index allows comparisons between organizations within and between sectors.

DEDICATION

To my grandparents:

G. Fales Peirce; V. Ruth Peirce; Corrinne G. Snow; and Howard L. Snow, Jr.

ACKNOWLEDGMENTS

Seven months ago, while reading through dozens of dissertations and theses for ideas, I was amused by the similarity among most of the acknowledgment pages included in those works. I fully appreciate those sentiments of gratitude now that I, too, have travelled the road of writing a thesis. There are many people I need to recognize, for a variety of reasons, which I will get to below. In general, however, let me simply thank everyone who has been within earshot during the past few months for putting up with me. I know I have not always been in the nicest of moods. Now that this is all over, maybe we can get together, have a drink, and catch up.

To Max, Jim, and Minnis I offer sincere thanks for your guidance and words of wisdom during the past two years, not only on this particular project, but on other endeavors as well. You all share a commitment to teaching and foster the best in others. For that, I am truly grateful. In particular, I need to thank my advisor, Max. You always knew when to back off and let me go and when I was getting lost or sidetracked and in need of stronger guidance. Your comments were almost always on target, and were always appreciated. I hope you didn't get too tired fixing all my comma splices and verb tense inconsistencies. Believe it or not, I caught almost as many of them before you even got my drafts. One of these years I'll get the hang of those two grammar rules.

To the "gang" - thanks. Our mutual "gripe and support" sessions have been immensely helpful to my remaining sane. In particular, I need to acknowledge publicly the help of Lander Denman, Theresa Garvin, Lesley Howard, and Deborah Santiago in collating and stuffing the survey mailing. Their help significantly reduced the amount of time necessary for mailing such a large survey (at the 0.01 level!).

I also need to thank Tammi Martin for reviewing an earlier draft of this beast, I mean study. Her comments as an outsider helped me focus my reasoning and ensured that I was not writing solely for those "in the know." As always, she reminded me that not everyone reads at the graduate school level, and that even though she understood what I was saying, a simpler and more direct sentence structure would aid others in gaining such an understanding. I hope I have achieved half of what she had in mind.

Finally, I gratefully acknowledge the support of my parents. Without their implicit faith in my ability, this undertaking would have been much more difficult. Knowing that I always have a place to go, no matter how tough things get, provides a tremendous sense of security, allowing me to focus on the task at hand.

One last comment. Every dissertation I read that had anything to do with religion included an acknowledgement to God, for His guidance and support. I'm not so sure which god is the true one to thank (him or her), whether it be the Christian or Jewish God, the Muslim Allah, the Greek Gaea, or the guiding / inner spirit of Buddhism or Quakerism, to name a few. Thanks may be the wrong term as well. Regardless of what I think, however, the world's inhabitants have deep faith in some form of supreme being, upon which is based a large portion of our social and economic structures. For this reason, religion is an important key to our understanding of fellow humans and the eventual global peace that so many constantly seek. Some day, perhaps, we will figure out how religion can be used to unify and bring about this peace, rather than divide and act as a xenophobic catalyst to maim and kill others. Until then, we can only contribute in our own small ways.

Jeffrey R. Peirce
Blacksburg, VA
May, 1994

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CHAPTER 1

INTRODUCTION

Cash management techniques play a significant role in enabling businesses to optimize their financial positions. Large corporations seek to manage not only their cash, but all of their assets, from loans and investments to physical plants. Local retailers also manage their cash by making daily bank deposits and paying their bills only when they are due. Cash management is a process for controlling the flow of money into and out of an organization for the purpose of optimizing its financial position.

Since the mid 1970's, managers in the public and non-profit sectors have also increasingly sought to realize the benefits of effective asset management. Many governments now aggressively pursue cash management strategies as one way of helping them maintain service levels while traditional sources of revenue shrink relative to increasing demand for those services. While there are often many legal and political obstacles for governments to overcome, the benefits of effective cash management are challenging more governments to overcome those hurdles (Steiss, 1989:81).

PROPOSAL STATEMENT

The benefits of cash management - a more complete understanding of financial standing, a stronger financial position, and an improved ability to plan and fund activities and expenditures - are just as relevant to the non-profit organization as to its government or business counterpart. This study explores the extent to which this argument is valid within a sample of religiously affiliated non-profit organizations by identifying and evaluating the patterns of cash management techniques they use.

Religious organizations form the base of the non-profit sector, not only with regard to the third sector's history, but also in terms of private contributions received. (The religious subsector alone received 54% of all charitable giving in 1990. Salamon, 1992:15) By focusing on a single subsector, this study avoids the complicating differences in missions that different groups of non-profits pursue. Differing missions may result in different financial practices. Research concerning the financial practices of this subgroup of the nonprofit sector has also been limited.

As Salamon & Anheier have recently noted, the current debate concerning social welfare reform deeply involves the third sector. Religious non-profits often play a key role in social service delivery.

> Sadly, however, what is known about this sector [in general] lags badly behind the demands for information being generated by the policy process. Under these circumstances, improving the base of knowledge about this sector in a systematic, comparative fashion has become a matter not only of great academic interest, but also of urgent policy concern (Salamon & Anheier, 1994:551).

This research helps to begin addressing this concern.

OBJECTIVES

This study has four objectives as listed in Table 1: *Objectives*. As its first aim, this study provides an empirical portrait of the adoption of cash management techniques in a sample of religious organizations in the third sector. These organizations are the regional-level offices of three national denominations: the Roman Catholic Church, the United Church of Christ, and the United Methodist Church. Data were obtained from these organizations through a mailed survey.

This study's second objective is the creation of an index based on a review of the cash management literature. Such an index should facilitate determining the relative sophistication of cash management implementation in the organizations studied. The index reflects categories of cash management techniques culled from the literature, while for the first time weighting those tools based on their relative level of difficulty and sophistication (as judged by a panel of experts). The index allows organizations to be ranked, with those that only employ basic techniques situated at the bottom and those utilizing a full range of complicated techniques placed at the top. This ranking enables comparisons between organizations and provides a useful tool for future studies of cash management in the non-profit sector.

The sophistication index is used to compare organization characteristics that might be related to cash management usage. The researcher hypothesizes that institutional "demographics," such as age, membership size, budget size, and size and professionalism of staff, are all positively correlated to cash management usage. For example, older organizations are hypothesized to use more sophisticated cash management techniques. Discerning those relationships is the third objective of this study.

The fourth objective of this research is to replicate a portion of a predictive model of cash management adoption earlier found to be accurate for a small group of religious organizations (Zietlow and Chisholm, 1988). Findings from this replication, as well as questions about the validity of the Zietlow model and ramifications for its future use are also explored.

Table 1: Objectives

1	To determine the extent to which a sample of religious non-profit organizations employ cash management techniques.
2	To determine the relative sophistication of this cash management use by developing an index designed to elicit the differences between "rough and ready" implementation and well-planned, reasoned cash management use.
3	To ascertain the variables associated with differing levels of institutional sophistication and use of cash management techniques.
4	To test the ability of Zietlow's cash management usage model (1988) to predict usage among the current set of sample organizations.

Before these objectives may be pursued directly, the history of cash management must be explored. Furthermore, the roles cash management plays in different types of organizations lay a foundation for the study. The second chapter addresses these matters. Chapter Three discusses the methods used in this research. Once the evolution of the cash management literature and the study's methodology are understood, Chapter Four presents the results of this research. Chapter Five draws together those results and discusses their implications for the field, its literature, and future research.

CHAPTER 2

LITERATURE REVIEW

I. INTRODUCTION

Cash management's history is fairly long, but straightforward, from beginnings in the private sector to adoption in the public sector, to eventual embrace by the third sector. The literature follows this trail of growing use, from an extensive body of research regarding private cash management to extensive treatment in the public sector to a growing, but still relatively limited, literature about non-profit cash management. This chapter reviews this literature while establishing themes that underpin this research effort.

Section II outlines the definitions of what cash management is as well as the various techniques that make up the field. After this cash management foundation is laid, the chapter's third section focuses on the cash management literature relating to the private, public, and non-profit sectors. Section IV discusses the religious subsector cash management literature in depth. Finally, Section V draws the key themes from this literature review together and discusses how they relate to this study.

II. DEFINITIONS

Cash management is a process for controlling the flow of money into and out of an organization for the purpose of optimizing its financial position. While this statement may appear concise and straightforward, the actual mechanics of cash management are not so easily simplified. Many techniques comprise the overall management programs with which financial optimization goals are pursued. A brief description of those techniques and the costs and benefits of using them follows. Each is listed in Table 2: *Cash Management Techniques*.

These descriptions often use illustrative examples drawn from the population studied (regional offices of religious denominations). More comprehensive explanations of these techniques can be found in most of the financial management textbooks listed in the bibliography.

Table 2: Cash Management Techniques

Cash Management Techniques
• Deposit incoming money daily (or the day it arrives). • Pay bills on latest due date before incurring penalties. • Use interest bearing checking and saving accounts. • Collect cash faster or pay it more slowly: a. Receivables: send regular reminders, make payment schedules. Pledges: send notices quickly, slightly before payment dates. b. Purchase on credit. c. Take advantage of discounts (both cash and quantity). • Use cash management services offered by banks, such as lock boxes, zero-balance accounts, concentration banking, and wire transfers. • Have a system of internal controls: a. Designate one person for cash management responsibilities. b. Adopt written guidelines for cash management procedures. c. Have more than one person responsible for cash transactions. Have someone other than the bookkeeper responsible for petty cash and bank statement reconciliation. Require two signatures for all check authorizations. d. Disburse all money by sequentially numbered checks. • Purchase fidelity bonding. • Competitively select bank and establish a renewable contract for a specified period of time. • Prepare cash budgets on a regular basis, as well as statements of cash flows or funds statements. • Establish an internal minimum balance (can use a model in this process). • Know the bank's minimum compensating balance. • Invest "excess cash" in interest earning vehicles, including money market (NOW) accounts, certificates of deposit, negotiable certificate of deposit, repurchase agreements, U.S. Treasury bills, US government agency securities, commercial paper, and banker's acceptances.

The techniques outlined in Table 2 reflect the principle of opportunity cost. That is, the benefits of achieving tighter control of an organization's financial position are weighed against the costs of obtaining that control. At some point, the costs of these procedures outweigh the benefits they produce. That is, the costs of pursuing a particular technique that the organization is able to implement may not be cost effective relative to other techniques the organization might pursue. Opportunity costs are calculated at the margins and not in an absolute manner.

Factors which might play a role in such opportunity cost calculations include the size of the organization (both in terms of members and staff), the age of the organization, the professionalism of the staff, and the magnitude of the organization's financial resources. These variables, therefore, have significant importance in helping to discern patterns in the organizational use of cash management.

To facilitate understanding of the field, the cash management terms and concepts used have been divided into three groups: techniques, categories, and programs. These three groups are the researcher's own constructs, based on his reading and perceptions of the literature. They allow the analyst not only to understand cash management more fully, both in practice and in the literature, but its application to the religious subsector as well by providing a hierarchical framework for the analysis of cash management implementation.

CASH MANAGEMENT TECHNIQUE - This group represents the actual "things" that cash management does; such as investing money in a certificate of deposit, or the "means" by which cash management achieves its ends, such as renting a lock box to collect payments. Cash management techniques are part of broader cash management tools.

CASH MANAGEMENT CATEGORIES - Categories are collections of techniques grouped around a theme. For example, internal controls are a common tool managers use to increase the financial security of an organization. The internal control category includes the following techniques (among others): developing written guidelines for cash management, requiring two signatures for all checks written, and having more than one person handle cash transactions. These categories are discussed further at the end of this chapter and in Chapter Three during the development of the sophistication index.

Cash Management Program - The program is a systematic approach to the management of an organization's cash, employing varied management tools. Organization 1's program may, and probably will be, different from Organization 2's program to reflect idiosyncrasies and unique organizational environments. Organization 1 may use some of the same categories as Organization 2, even though its overall program is different.

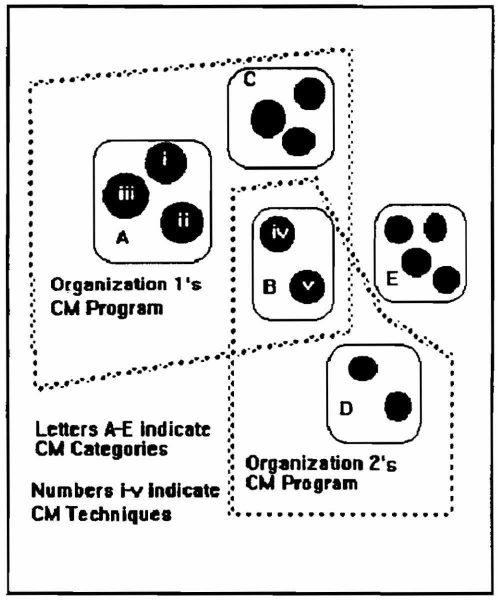

Figure 1: Cash Management Techniques, Categories, & Programs

In Figure 1, categories A, B, & C are used by Organization 1, while categories B & D comprise Organization 2's cash management program. Neither organization uses category E. Category A consists of techniques i, ii, & iii, while category B consists of techniques iv & v.

The Techniques

Deposit incoming money daily (or the day it arrives) - By depositing all money and checks as soon as possible, the organization can earn interest and/or gain access to those funds quickly. By failing to take advantage of this opportunity, the organization can effectively forego substantial amounts of money, particularly when interest rates are high, when the amount involved is significant, or when the incoming money may delay or offset the need to borrow to meet cash flow obligations (Connors & Calaghan, 1982:57).

For organizations that do not receive substantial cash on a daily basis (which often have small staffs), the extra interest earned may not offset the increased amount of work performed to obtain that return. In such cases, large sums of money may sit idly in a bookkeeper's drawer for days at a time. To help minimize this potential problem (both from a financial and a security standpoint), organizations can set a dollar total that triggers a deposit. A regular schedule for deposits is an alternate method. But if such a schedule is even once per week, the potential exists for an odd large check to sit in a drawer for seven days, increasing the chance of theft, as well as the opportunity cost of earnings foregone.

PAY BILLS ON LATEST DUE DATE BEFORE INCURRING PENALTIES - Waiting until the last moment to pay bills allows the organization to keep its money in interest-bearing accounts as long as possible. Payment of bills upon receipt does not gain the organization any benefits other than a reputation for paying bills quickly (and among those in the financial field, a reputation for not being particularly savvy). The speed at which an organization pays its bills, as long as it is not delinquent, is not part of credit standing calculations. By waiting until the due date, the organization maintains a reputation for paying its bills on time (and maintains its strong credit rating), but uses that money for its purposes to its own advantage before releasing it (Siegel & Shim, 1992:75).

Cash discounts for purchases are another dimension of paying bills only when they are due since such discounts are often tied to when the bill is paid: such as in "2/10 net 30." Such a discount describes the percent off (2) if the bill is paid early (within 10 days). If the bill is paid in the normal 30 days, no discount is offered (nor is there a penalty). Such a discount is often worthwhile, as in this example in which 2/10 net 30 is equivalent to 36.7% interest a year (Olenick & Olenick, 1991:369). The formula for this calculation follows (Mikesell, 1991:447).

$$\textit{Annual Percentage Rate} = \frac{\textit{Amount Saved from the Discount}}{\textit{Amount Paid}} \times \frac{365}{\textit{Days Paid Early}}$$

USE INTEREST BEARING CHECKING & SAVING ACCOUNTS - By utilizing accounts that pay interest, the organization ensures that its money is always working and not sitting idly or providing a return to another organization (i.e. a bank). Use of interest-bearing accounts has become almost standard today, since most banks pay interest on almost all of their accounts (Mikesell, 1991: 441).

Collect cash faster and/or pay it more slowly - These techniques maximize the amount of money the organization has at any given time so that the money can be invested for the organization's benefit. Such techniques range from simple reminders to those that owe the organization money (such as pledges) to using credit consciously (such as a MASTERCARD or VISA card) to buy almost everything possible. Credit delays the actual payment of funds by at least one month, often close to two. More complicated, but often effective, is the scheduling of payments for those that owe significant amounts of money, or who are often slow in paying, thereby increasing the likelihood that the money will be received (Steiss, 1989:87).

Use of Banking Services - Another method of maximizing cash available to an organization involves the use of services offered by banks such as lock boxes, concentration banking, wire transfers, and warrants. These procedures are mainstays of cash management. Some, such as wire transfers, have become so commonplace that they are now used routinely outside the cash management realm. ATM and credit card networks around the world are based on wire transfer technology (Finnerty, 1993:138-142). (Actually, wire transfers are one specific type of electronic financial transactions. For the purposes of this study, the term wire transfer is used to signify any form of electronic transfer of funds. The differences are only relevant to the advanced cash manager and the term is so common that its use facilitates understanding of the concept.)

Lock boxes are special post-office boxes to which an organization's customers/constituents send money, whether for a fund raiser or for paying bills. A bank collects and processes the contents of the box every day. All monies are deposited directly into an organization's main account the day the monies are received, thereby increasing the amount of time such funds earn interest for the organization. All non-financial mail is forwarded daily to the organization, along with a detailed statement, usually in electronic format, of the monies deposited. The organization may then allot the monies into the appropriate funds. The equation on the next page can be used to determine the smallest monetary denomination for which a lock box system will provide a return (Mikesell, 1991:445).

$$\textit{Minimum Check Size} = \frac{\textit{Lock Box Charge} \times 365}{\textit{Short Term Interest Rate} \times \textit{Days Saved through Lock Box}}$$

Concentration banking is a technique employed by large organizations to speed up collection of money and to slow down disbursement of funds. In the first case, the organization contracts with banks in various regions of the country to serve as receiving locations, usually through lock box arrangements. Money mailed from that region stays in that region thereby reducing the amount of time funds spend in the postal system where they are unusable to the organization. After depositing the monies, the regional banks wire the funds to the organization's central bank, often many times a day. In some cases, the regional banks only wire funds available above a minimum sum which remains on deposit as a compensating balance (described below). Other arrangements involve the use of zero-balance accounts at the regional banks in which all the money is wired to the central bank (usually at the end of each day), thus keeping the regional banks' accounts at zero. Since such services cost money, either through foregoing interest on compensating balances or paying direct fees-for-service, concentration banking is usually only beneficial if the amounts of money to be processed are significant (Finnerty, 1993: 24-28).

Warrants are used in place of checks. Just like a check, an organization writes a warrant to a vendor to fulfill an obligation. When the vendor presents the warrant to the bank for payment, however, the bank must check with the organization for approval before releasing the money. This procedure is intended to allow the organization to keep its funds in interest-bearing accounts until the moment that the money is needed to pay a bill. When the bank calls for confirmation, the organization approves the warrant and transfers the appropriate amount of money to the correct account (Patitucci & Lichtenstein, 1977:66).

An alternate definition of warrants can be found in Reed & Swain (1990:178). They describe warrants as legal payments that governments issue when they do not have the funds necessary to meet obligations. Financial institutions can choose to convert warrants to actual cash if they desire, and the government may replace warrants with cash at a future time. However, the holder of warrants has no legal recourse to obtain actual cash since the warrants are not viewed as legal tender. For the purposes of this study, the former definition will be used, as it is applicable to all kinds of organizations, not just the public-sector.

Minimum compensating balance - In return for providing some services, a bank may require that organizations keep a certain minimum balance in the bank's accounts. This balance compensates the bank for the services rendered (Wacht, 1984a:192) since the bank only pays a minimal amount of interest on this balance and has the money available in its accounts to invest at higher yields. This money becomes a revenue source for the bank in lieu of direct fees charged to the organization. Because of this, organizations must know the minimum compensating balances required by their banks, and the services obtained for that money (that is therefore not available for investment at higher yields). Competitive bidding between banks (discussed below) is one way organizations can minimize the amount of money tied up in compensating balance requirements.

Internal controls - The cash management techniques in this category are varied, but all have a central theme: they are designed to increase the security of an organization's funds as they move through the organization's financial system. They can range from relatively simple mechanisms such as requiring two signatures on all checks written (so at least two people concur regarding the necessity of payments) to more complex policies involving multiple people collecting, counting, recording, depositing, and reconciling cash transactions. They can also include computer access codes and logging systems to control and track who utilizes cash or financial information (Gross et. al., 1991: 433-446).

Fidelity bonding - This technique involves the purchase of insurance for protection against potentially dishonest employees. If an employee embezzles funds, for example, that loss is covered by this form of insurance. Often, by purchasing such insurance, the organization sends a signal to its employees that it takes money management seriously. In addition, the bonding company often investigates the insured organization's cash management procedures (particularly internal controls) to ensure that the overall control process is sufficient to minimize potential losses (Connors, 1980:6-81).

COMPETITIVELY SELECT BANK - By using this procedure, as well as establishing a renewable contract for a specified period for their bank(s), organizations ensure that they are receiving the best available services for the least cost. Banks are a business, and like other businesses, compete against each other for market share. This competition can include offering different cash management services, as well as very different prices for similar services. Bank fees can become a significant expense (particularly as an organization's size and financial activities increase). In trying to maximize its financial position, bidding between banks enables an organization to minimize this financial cost of doing business, while maximizing the number of services available to it (Coe, 1989:124-126).

CASH BUDGETS - While banking services may be a mainstay of cash management, cash budgets are *the* central element of effective cash management. Without a budget and its correlating Statements of Cash Flows or Funds Statements, an organization cannot know how much money it has to invest, or for how long it can invest that money. Cash budgets can be prepared yearly, as most of the surveyed organizations do. Truly effective cash management programs, however, demand weekly or even daily cash budgets. These budgets act as guides, informing the cash manager how much cash is likely to be available for each kind of investment and obligation (Orgler, 1970:4-9).

An example of daily cash budgeting's benefits involves a large organization and its payroll. At first glance, when the organization cuts its payroll checks, one would assume that the organization should have all the money necessary to pay those checks in its checking account. However, by analyzing past trends of the length of time its employees take to cash their checks, the organization could delay the transfer of funds from higher interest-bearing instruments into the checking account. Only a portion of the employees cash their checks the day they receive them. Others wait a day or two before cashing them. Some checks may even remain in an employee's drawer and not get cashed for a week or more. This check cashing will, over time, evolve into a pattern. If this pattern is known, it enables the organization to budget daily the amount of money required in its checking account, thereby maximizing the interest earned from the funds prior to their use to meet payroll. With the explosion of wire transfer use, this advantage has diminished, but not all employees participate in direct deposit programs (Siegel & Shim, 1992:76).

Internal minimum balance - As a central part of cash budgeting, an organization establishes a minimum balance for cash on hand (liquid cash) to ensure that it can meet its obligations without penalties. For example, if an organization invests in a Certificate of Deposit (CD) that matures on the first of next month but does not leave enough cash to meet its payroll on the last day of this month, it must either borrow money for one day or withdraw the money from the CD early. In both cases, the organization pays a price (either interest on the loan or loss of interest and penalties for early withdrawal of the CD). The minimum balance also provides for a cushion in case the forecasts in the cash budget are wrong (Finnerty, 1993: 73-75).

Since the minimum balance is so vital, many methods have been developed to calculate it. The Miller-Orr model of determining minimum cash balances is used when cash balances do not follow any predictable pattern. The model was established by Merton Miller and Daniel Orr in 1966, and specifies that an upper limit (h) and a desired amount (z) of cash to be held are set in advance. When the amount of cash reaches either the upper limit or zero, investments are either made or cashed to restore the balance to z (see Figure 2). In practice, a zero balance is undesirable, so a higher amount is used as a minimum, and the other two targets are moved higher accordingly (Aronson & Schwartz, 1987:355-356).

The equation at the right determines the best value for z, where b = the fixed cost per security transaction, σ^2 = the variance of daily net cash flows, and i = the interest rate per day on marketable securities.

$$z = \sqrt{\frac{3b\sigma^2}{4i}} \qquad h = 3z$$

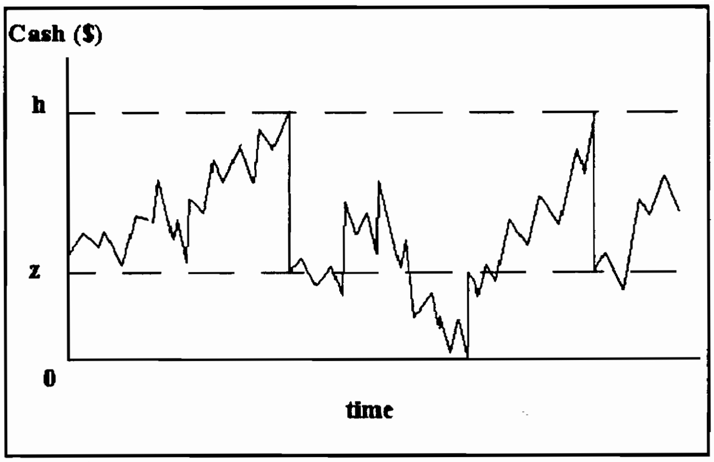

Figure 2: Miller-Orr Model for Determining Minimum Cash Balance

The Economic Ordering Quantity (EOQ) model (also called the Baumol model) for determining the minimum cash balance is based on inventory management theories. The opportunity costs associated with holding cash (as opposed to investment vehicles) are weighed against the transaction costs associated with moving funds from investment vehicles to cash accounts (like checking). In other words, a higher average balance (and thus lower return on the remaining balances) coupled with only a few transactions may be less expensive than a lower average balance (resulting in higher returns on the remaining investments) with more frequent transactions.

$$P = b\left(\frac{T}{C}\right) + vT + i\left(\frac{C}{2}\right)$$

This equation determines the total costs of carrying cash, where P = total cost of cash management, b = fixed cost per transaction, T = total amount of cash expenditures over the period involved, C = amount of each transfer (the maximum amount of cash held at any time), v = variable cost per dollar transferred, and i = the excess of the interest earned on investments over the rate earned in the cash account.

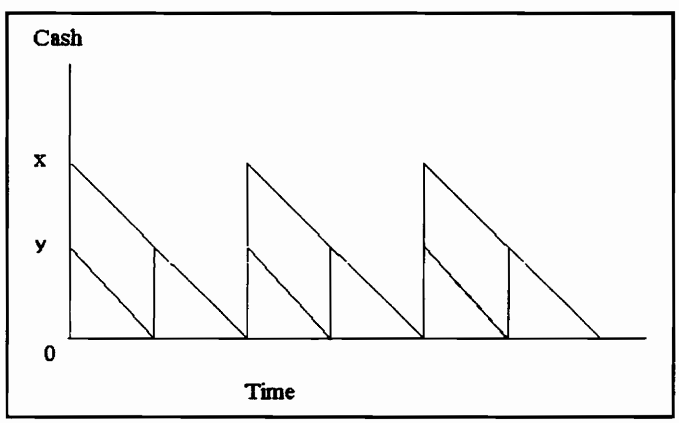

Figure 3: EOQ Model for Determining Minimum Cash Balance

The EOQ model is useful when expenditures are both predictable and fairly constant. Usually, instead of using $0 as the minimum amount needed to trigger a transaction from investments to the cash account, a higher dollar amount is used as a safety margin. This is particularly true if the transactions do not provide immediate cash, but have a slight processing delay (Aronson & Schwartz, 1987:352-355).

The above methods are relatively complicated, and little used in the organizations studied. Instead, past practice, trial and error, and rough operating rules-of-thumb (such as two-months of expenditures) are used. Whatever method is employed, the process of establishing a minimum balance requires an organization to analyze its financial situation and make explicit decisions about its financial policy. Such efforts enhance the likelihood of successful cash management implementation.

INVESTMENTS - Investment of funds is determined by an organization's cash management program. The organization determines which vehicles to use. These may include the following: basic interest earning, including Money market / NOW accounts; certificates of deposits (both fixed and negotiable); repurchase agreements; U.S. Treasury securities; U.S. Agency securities; commercial paper; and banker's acceptances. Sometimes, as in the case of local governments whose choices are constrained by state law, the choice of which vehicles may be used is determined by another organization or government. Detailed treatments of these various vehicles, along with typical yields, relative liquidity, and security, may be found in many of the various financial management texts listed in the bibliography (for example, Finnerty, 1993:31; Reed & Swain, 1990:219-224; Coe, 1989:139-146).

This review of cash management techniques illustrates the broad range of the field. It has also raised the issue of sophistication as some of these techniques are obviously more complicated to implement than others (such as determining a minimum balance versus depositing money daily). This sophistication will be delineated below in Chapter 3. A third point to which this review leads is the various degrees of utility these techniques have for organizations in different economic sectors. These differences are discussed in the next section.

III. Cash Management in Practice: The Literature

Most cash management techniques are not practiced differently by private, public, or non-profit organizations. However, which techniques are used, and the framework or financial management program under which the procedures are implemented, do differ among types of organizations. Accounting frameworks also frequently differ between sectors. A brief summary of these different programs and characteristics follows.

Private Sector

The private sector operates under a profit-maximization philosophy that drives every decision. Cash management, indeed all of financial management, helps fulfill this goal by ensuring that all money the organization has access to, in all its forms, is working as hard as possible earning more money. Although cash management was originally viewed as a custodial function, operating to ensure that enough cash was on hand for business needs, it has evolved and become more sophisticated. Safekeeping of funds in all economic conditions remains its focus, however, as well as helping to achieve the organization's profit-maximization objectives (Hill, 1970:23).

Many view 1947 as the year in which modern cash management was born, with the introduction of lock box services for RCA by First Chicago and Bankers Trust (Stone, 1990:45). Until 1960, however, overall financial management dominated the corporate treasurers' duties. Slow communication (by today's standards), low interest rates, and little computerization provided an atmosphere in which cash management was conceived simply as ensuring adequate cash balances to meet credit and loan obligations.

During the 1960's, the development of automated check-processing (facilitated by the new computer-readable number codes on the bottom of checks) resulted in the rapid growth of lock box use. By 1970, however, lock boxes were still the only widely available cash management tool (Stone, 1990:47). During the 1970's, the explosion of computing capabilities, reduction of federal regulations, the internationalization of the banking community, and wild fluctuations in interest rates led to the "coming of age" of widespread private-sector cash management. This blossoming included a growing cash management profession as well as an explosion of services offered and provided in the marketplace.

The Monetary Control Act of 1980 mandated that "the Federal Reserve price its services to banks at cost plus a private-sector markup reflecting the role of a[n imaginary] private sector competitor. Float also had to be priced or eliminated" (Stone, 1990: 52). (Float is the time between paying for a service or product with a check and the time the money is actually transferred from a purchaser's bank account to a vendor's.) This Act led to a shift during the 1980's in cash management focus from float-focus (in-faster and out-slower) to overall operating efficiency. Indeed, by the early 1980's, bank's cash management services were the leading factor in Fortune 1200 companies decisions to change banks (Stone, 1990:52). By 1990, cash management had become a major source of corporate revenue.

PUBLIC SECTOR

The public sector does not operate under a profit-maximization mandate. Instead, it is charged with providing services to a given population. These services often are either not able to provide a short-term monetary return to investors (i.e. education for all citizens regardless of income) or need a monopoly environment to provide such a return (i.e. utility services). In this context, effective cash management provides additional resources to facilitate the provision of public services (Wacht, 1984a). Since more funds will lead to policy debates concerning the end use of those funds, the financial management program must have the political support and general supervision of elected officials.

Patitucci & Lichtenstein (1977) have outlined the key actors in the local government cash management process. These include departmental personnel as well as councilors, mayors, and city managers. The roles these various actors play resemble the roles played by individuals with like responsibilities in the private sector. The local legislature or city council sets the cash management policies as does the private corporation's board of directors, while the mayor or city manager acts like the chief administrative officer of the private business in setting goals and objectives needed for fulfilling the established policies. This person also lends support to the implementation process. Below the top administrative positions, public sector position titles for officials involved in cash management programs are often quite similar or even identical to those found in the private sector: Finance Director, Treasurer, Comptroller, Department Head, Purchasing Agent, Grants Coordinator, and Capital Improvements Coordinator.

While the administrative framework for cash management laid out by Patitucci & Lichtenstein is similar to that found in the private sector, the economic, political, and social milieus are inherently different for the public sector. As Steiss (1989) and Mikesell (1991) point out, the private sector does not provide certain services due to their inherent nature (such as providing for the public safety and allocating basic benefits without regard to ability to pay). The same features that prevent the private sector from providing such services also "limit the extent to which business management techniques can be applied in the management of public resources" (Steiss, 1989:2). Specific constraints have not been widely researched in the public cash management literature, but are generally considered to be due to the character of services rendered and to state and federal regulations, laws, and constitutions. One 1985 study (Nwagwu) identified inadequate resources, legal and political restrictions from the state and federal governments, and general market forces as three actual constraints on local governments in Virginia and Maryland. Many limitations imposed by various levels of government involve liquidity, risk, and financial responsibility issues.

An extensive literature discusses the similarities and differences of private and public financial management practices. During the 1970's and 1980's, as federal assistance for many local programs was significantly reduced and interest rates and inflation skyrocketed, both academics and practitioners focused on ways to improve the financial stability and position of state and local governments. The New York City fiscal crises and California's Proposition 13 also helped focus attention on these issues. All this attention contributed to a significant reduction in the percentage of state and local government assets that were held in demand deposits (e.g. checking and NOW accounts) from 39% in 1950, to 25% in 1965, to 12% in 1975, and finally to 4% in the 1980's (both 1985 and 1987) (Mikesell, 1991:441). This shift in actual practice reflects the growing understanding that government funds on deposit are public assets that, if managed effectively, provide a potential source of increased revenue.

NON-PROFIT SECTOR

Like the public sector, the non-profit sector also provides services rather than simply striving for profit. (Corporate CEOs argue that private businesses also provide services and do not simply strive for profit. Indeed, many non-profits do make profits but do not distribute those profits to their employees, governing boards, or stakeholders. Instead, non-profits plough profits back into their organizations.) Unlike the public sector, non-profits cannot levy taxes to ensure income to pay for services provided. Instead, the non-profit must rely upon fees for service, donations, contracts, and grants. Except for fees, these revenues cannot be coerced from the providing person or organization, leaving the non-profit under funded if the payor decides not to honor prior pledges. Fees for services (including contract services) are available in significant amounts only to certain non-profits, such as schools, hospitals, and day-care centers.

Pledges (as revenue sources) are somewhere between a pure donation or gift and an enforceable obligation such as a fee for service. Most people, once they have pledged, view such commitments as morally obligatory. Whether the receiving organization can legally enforce collection of pledges, however, is unclear (see Anthony & Young, 1988:99 and Gross et al., 1991:134). Regardless of whether pledges can be legally enforced, most non-profits would not pursue such measures due to the negative public image such actions would generate. By using forecasting techniques, however, non-profits can predict relatively accurately how many of the pledges they receive will not be paid and budget accordingly.

Funding streams for many non-profits, hinging on grants and donations, create an uneasy work environment. Even contracts are not stable over the long term, as their renewal is rarely guaranteed (Gronbjerg, 1993). Governments also regularly delay scheduled payments to non-profit contractors (Bernstein, 1991). In this context, non-profit cash management plays a crucial role in helping to ease the financial strain and uncertainty of funding fluctuations. Cash management cannot completely eliminate the risks of these fluctuations but it can reduce their potential severity and soften possible consequences.

Implementation of highly effective cash management raises an interesting paradox for the non-profit organization similar to one raised in the public sector. The paradox lies with the ability to maintain service levels while funding levels drop. If an organization can do more with less in the short term than why does it need to increase those funding levels? For example, a state university may be able to survive a budget cutback by increasing its financial management performance and reshuffling funds. When the legislature sees that the university can maintain its service levels with the reduced amount of funding it has no incentive to restore the funding to prior levels.

The key to this paradox is time. Over the short term organizations are often able to maintain service levels with reduced funds. However, over the long term such magical hat tricks as deferring maintenance and pay raises catch up with the organization. The longer the interval between the initial revenue shortfall and the inevitable service cutback, the more difficult it is for an organization to convince funding sources of the need for higher revenues. Of course, if the organization is not able to manage the initial shortfall effectively then questions are raised concerning the abilities of the financial management team. Balancing these short term expectations with the long term realities is the art of truly effective financial management.

Non-profit organizations have increasingly adopted financial management procedures and formal financial standards during the past thirty years. In 1964, the National Health Council and the National Social Welfare Assembly issued *Standards of Accounting and Financial Reporting for Voluntary Health and Welfare Organizations*, and 1980 saw the Financial Accounting Standards Board (FASB) issue a concepts statement on the *Objectives of Financial Reporting by Nonbusiness Organizations*. In 1978, the American Institute of Certified Public Accountants (AICPA) issued Statement of Position #78-10, *Accounting Principles and Reporting Practices for Certain Nonprofit Organizations*, primarily relating to local religious congregations (Gambino & Reardon, 1981). These formal guidelines establish standards for the calculation of depreciation of fixed assets as well as for budgeting, auditing, and financial reporting. These standards, however, focus on accounting procedures and not on cash management processes per se (Gross et al., 1991).

Specific guides to cash management practices in non-profit organizations may be found in many texts. Often, these volumes cover all aspects of financial management while devoting one or two chapters to cash management (for examples, see: Connors, 1980; Connors & Callaghan, 1982; Wacht, 1984a; Anthony & Young, 1988; Olenick & Olenick, 1991). Each typically covers the principles underlying cash management (discussed above) while providing descriptions of various techniques. They are almost all normative in tone, urging implementation of comprehensive cash management programs. One early work (Gray, 1970) devoted a chapter to how local religious congregations could establish such cash control procedures.

Articles appearing in various journals during the past decade have repeatedly pointed out the benefits of improved financial management generally, and effective cash management specifically, for non-profit organizations. A representative sample of these titles include "Financial Management as a Fund-Raising Tool" (Lyons, 1986) and "Non-Profits Profit by Good Banking Relationship" (Leduc, 1981) to "Purchasing vs. Leasing Property for Nonprofit Organizations" (Alper & Gvozdich, 1990) and "How a Small Organization Can Audit Its Books" (Dalsimer, 1990). In general, these efforts tend to treat the same or similar material found in the various text books. Unlike the texts, however, these articles are usually only a few pages long and are targeted at the practicing professional; not the student or academic.

There are few empirical studies of non-profit sector use of cash management. Coe & Ellis (1991) examined internal control failures of government-supported non-profits (such as fire districts and social service agencies) in North Carolina. Gambino & Reardon (1981) studied the internal management systems of large non-profit agencies located in the Northeast Corridor. These organizations were voluntary health and welfare associations, arts groups, religious institutions, private foundations, and professional societies. The study dealt "with internal management of the organizations selected and [paid] particular attention to those areas of management in which improvements should be made" (1981:4). Gronbjerg (1991a, 1991b) studied nonprofit social service agencies' performance in managing their funding sources.

In general, this limited literature offers exploratory information about various financial management programs for only a few specific non-profit institutions. There has been no systematic exploration of the financial management practices of significant nonprofit subsectors. (Two notable exceptions to this statement must be made. Many studies have been made of the health-care and higher education subsectors in many aspects of financial management. However, since these two subsectors are inherently different from the rest of the third sector due to their regulatory and competitive environments, as well as being "commercial" fee-generating non-profits, generalizations cannot be made from these subsectors to other subsectors.)

This literature does, however, show evidence of a growing sense of direction in the study of non-profit management more generally. In the past few years, major research projects have been initiated, including the *Johns Hopkins Comparative Nonprofit Sector Project* and the various efforts of the *Independent Sector*. These studies are all aimed at increasing our understanding of the third sector in general while exploring its various component parts.

IV. THE RELIGIOUS SUBSECTOR

In 1989 75% of all United States households contributed to charity (Hodgkinson & Weitzman, 1990:1). Religious organizations received 54% of all private charitable giving in 1990 (Salamon, 1992:15). Of the roughly 1.14 million non-profit organizations in 1989, approximately 350,000 were religious congregations (not including religiously affiliated service organizations), representing almost one-third of the third sector (Salamon, 1990:13,22).

As discussed above, there is a growing literature concerning the management of non-profit organizations. Most texts addressed to the sector include a section concerning financial management. Some include a short chapter about cash management. However, very few directly address the needs of religious non-profits or how cash management can be used in those organizations. Indeed, as O'Neill (1989) noted, the religious subsector has traditionally been ignored almost universally in the non-profit literature. Recently, however, significant strides have been made in closing this information gap regarding the overall size and scope of the religious subsector with the efforts of Hodgkinson & Weitzman at the Independent Sector (1988 & 1990).

A few studies specific to financial practices in the religious subsector have been conducted, but they have either been small and not generalizable outside the few organizations studied (Jordan et al., 1991), or have focused on abstract (or single-case study) theories and strategies that are proposed for local congregation use (Scofiled & Milano, 1984; Arndt & McCabe, 1986). With only a handful of exceptions (discussed below), none of these studies focus on broader patterns in the subsector as a whole.

A brief review of syllabi from theological programs (obtained from a variety of denominations) revealed that financial management is rarely even discussed in local-congregation management-for-clergy courses. Of the 21 syllabi reviewed (Institute for Nonprofit Organization Management, ND), which came from church management courses for clergy, only six contained sections on financial management (and these were often only one or two class meetings during one semester). One course listed studying church finance computer programs as a potential term paper topic. Three other classes listed financial management textbooks on their recommended reading lists but did not list the issue anywhere else on the syllabus. This lack of inclusion suggests that, at the level of clergy training, financial management is not seen as a high priority in the field.

One recent research effort focused in part on the financial practices of the religious subsector (Hodgkinson et. al., 1988). This study explored the size, location, and programmatic efforts of local religious congregations nationwide. It also investigated the overall revenue and expenditure patterns of local congregations to elicit patterns among services this subsector provides to local communities. It did not focus on management issues per se but instead provided a much needed macro-perspective of the subsector's activities.

Four older studies, all doctoral dissertations, have explored the more focused questions related to the religious subsector's financial management practices. Landry (1982) comprehensively analyzed the parish-level financial management practices of the Roman Catholic Church in Canada under Vatican II. She "identif[ied] uniform accounting & financial reporting procedures compatible with the needs and requirements of Roman Catholic Religious Congregations in Canada" (1982:3). Smith (1982) identified the "actual accounting principles and reporting practices used by the group of [United States] churches whose business administrators belong to the National Association of Church Business Administrators (NACBA). The NACBA is national in scope [sic] and represents larger churches from many denominations" (1982:199).

Griffin (1979) focused on the use of budgeting as a management tool in Methodist congregations in the Tennessee Conference. After providing a portrait of the then current budgeting practices, including analysis by size of congregation and reviewing the guidance offered to the local congregations from the regional Conference office, he found that most churches did not use budgets as a management tool at the time. He further developed a "feasible means for implementing program budgeting in churches with[in] the existing organizational structure" (1979:5).

The most recent study by Zietlow (1985) analyzed the financial management practices of forty-seven independent, non-denominational religious foreign mission agencies. He examined whether private-sector financial practices were applicable in these third-sector agencies. The practices analyzed included financial planning, cash management, fund raising management, capital budgeting, and portfolio investment strategies. He also studied the applicability of business financial concepts, models, and techniques to these religious subsector agencies (1985:3).

He did not focus on the similarities between the non-profit agencies studied and the public sector, but rather questioned whether private-sector financial management practices were applicable to the third sector. Indeed, as the above review has illustrated, there are many similarities between the public and non-profit sectors that Zietlow ignored. His literature review instead focused on the "uniqueness" of non-profits, and drew as "the key point in the nonprofit accounting literature ... that better information is necessary for better decisions and accountability" (1985:14).

Zietlow's review of the general non-profit literature focused on discerning the financial management theories posited therein but failed to draw upon the broad themes the literature does present. Instead, he spent most of his effort pursuing theoretical questions about the objectives of non-profits, and how business-related financial management practices could be related to those objectives. When Zietlow and Chisholm published part of the 1985 study as a journal article in 1988, they did not reference a single non-profit or public management text (both have degrees in the business management field, and the journal, *The Journal of Cash Management*, is a business sector oriented journal).

Zietlow analyzed the various levels of cash management technique utilization in a subset of mission organizations, and presented a chart (1985:71) showing the percentage of responding organizations that used each practice. On average, organizations used only approximately four of the fourteen techniques included in the study (a 26% usage rate). While he did not provide an index or scale of cash management usage, he did correlate cash management usage against agency age, agency size, and the business education of the CFO. His results were impressive. When all three indicators were combined to form a predictive model, he was able to predict cash management technique usage correctly over 75% of the time (Zietlow & Chisholm, 1988:81).

Not discussed in the study were exogenous variables that might have contributed to such high predictability. The forty-seven religious charities studied were all members of the Inter-denominational Foreign Missions Association. These organizations were selected since they all used the same accounting and administrative procedures manual and were completely donation-dependent non-profits; thereby ensuring they were not "businesses in disguise" (Zietlow & Chisholm, 1988:81). If all organizations were striving to follow the same guidelines, then factors such as organization age and size would clearly be related to how well they reached those management objectives. If the guidelines suggested the use of cash management techniques, then as organizations became more established and could increase their compliance with the guidelines, they were more likely to use more of the techniques. The relationship Zietlow found between his indicators and the adoption of cash management techniques is only partly explained by the variables studied (age, size, and education of the business officer).

Furthermore, the model was devised to test the assumption that business cash management techniques could not be adopted by the non-profit sector simply because of the inherent differences between the two sectors. Almost all public and non-profit management texts have included a section on financial management for years, as discussed above. Nevertheless, Zietlow and Chisholm (1988) suggest that the "mainstream cash management literature ... gives one reason to believe the non-profits cannot implement 'business-oriented' cash management techniques" (81). Even though they do not appear to understand fully the nuances of management in the third sector, they do reach a sound conclusion: "agencies cannot hide behind their nonprofit status when it comes to the implementation of sound cash management practices" (1988:81). They fail, however, to discuss or suggest why such advice is sound.

V. KEY THEMES

As the relative scarcity of literature suggests, there is a need for studies analyzing cash management usage in a cross-section of third sector organizations, including the religious subsector. These analyses should seek to identify organizational factors that correlate closely with cash management usage in order to develop a better understanding of the subsector's practices. Such analysis would elicit which variables appear most significant in determining religious non-profit adoption of specific financial management practices. The literature needs to buttress the normative claims of text book authors with analytic study of what organizations in the subsector are actually doing. Such field work should lead to improved understanding as well as more effective financial management practices.

This study contributes to the development of a research literature focused on non-profit cash management utilization by building on the few studies already conducted. By analyzing cash management practices in three different, national, religious denominations, it breaks the pattern of small, individual case-studies that has dominated the field until now. It supplies the cash management and non-profit literatures with an important view of actual practice in a fairly wide segment of the subsector. Such knowledge should help to bridge the gap between the gospel (as presented in financial texts) and the followers (the actions of those in the workplace).

Throughout the literature discussed above, references abound concerning the ways to implement effective cash management programs. Nowhere, however, is there a suggestion as to how to measure implementation, particularly in the third sector. Without such a tool, comparisons between organizations, and indeed sectors, is difficult, as Zietlow found. This research presents the first attempt at developing such a measurement tool by focusing on the sophistication of cash management implementation.

Such a measurement tool must be based not on management theories that are bound in the realities of one sector, but upon the actual cash management techniques that do not vary from sector to sector. Other researchers have also seized on the benefits of using the structure of the "real world" as the basis for formulating categories and classifications describing that world. Salamon and Anheier (1994) are currently in the process of mapping the non-profit sector comparatively across nations by using the sector's structural characteristics and basic operations as their conceptual foundation.

As suggested above, cash management techniques can be grouped into categories based on their objectives. Stone (1990) suggests three generations of cash management services or products in his sketch of the evolution of private-sector practice. These generations (Basic Products, Value-added Processing, and Information-based Products, 1990:49) are useful in understanding inherent differences in various techniques, but are based on differences of why (and how) the techniques are provided, not used. They are too broad to be useful analytical tools.

Patterns of technique usage can be discerned from the descriptions of the techniques in financial texts. Groupings which are frequently discussed include cash budgeting, increasing cash reserves, internal controls, and investments. These four groups can be broken down into seven smaller categories based on the level of difficulty and sophistication of the techniques within the groups. Increasing cash reserves becomes the categories Basic, Increase Cash (internal), and Increase Cash (external). Investments becomes Simple Investments and Advanced Investments. These categories form the basis of the sophistication index discussed in Chapter Three.

Four doctoral students during the past decade have begun the process of exploring the financial practices of the religious subsector. This research attempts to go the next step, by not only adding to this small body of knowledge of subsector financial practices, but also by providing a tool which can be used in further research. This tool can be used not only in this subsector, but throughout the cash management field. To build on past research, this study replicates a portion of Zietlow's predictive model (1985). Such a replication is important to gain an understanding of cash management in practice, despite the problems with the original study's theoretical framework described above. It is only through careful replication and study that true understanding of phenomena emerge.

In summary, therefore, the following chapters will focus on these themes: providing empirical evidence of cash management usage to buttress the normative claims of text book authors; creating a tool for measuring the sophistication of cash management implementation; and discerning variables related to cash management use. Chapter Three focuses on the study's methodology and the proposed index of cash management sophistication. Chapter Four presents the findings from the research and Chapter Five discusses their significance.

CHAPTER 3
METHODOLOGY

SURVEY

The primary data for this research were obtained through a survey consisting of 49 questions (a copy appears in Appendix A), mailed to a sample of religious non-profits (at the regional level of their organization) of three denominations: the United Church of Christ, the United Methodist Church, and the Roman Catholic Church. The total N was 191. The survey was targeted to the person responsible for the day-to-day financial operations of each organization. These individuals were the actual respondents (or units of observation) who provided information about the organizations for which they worked (the units of analysis).

A postcard alerting potential respondents of the forthcoming survey and explaining its purpose was mailed one and a half weeks prior to the mailing of the survey. Approximately three weeks after the mailing of the survey, a follow-up postcard was sent to the 100 non-respondents. These three mailings contributed to an overall return rate of 54% or 103 surveys. Mailing lists for the regional offices of these three denominations were obtained directly from churches affiliated with the denominations involved.

The survey was mailed to three regional offices, one for each denomination studied, for review prior to mailing to the entire sample. Two of these surveys were returned, and the reviewers' comments were incorporated into the final survey. The comments were minor in nature, and focused on wording changes to reflect more accurately the various denomination's terminology. While this review process did not constitute a full pre-test of the survey, it did illustrate that the instrument was reasonably understandable and short enough to elicit a strong response rate. The questionnaire solicited basic institutional data as well as information concerning the financial operations and status of the organization.

Respondents were informed that all individual responses would be kept confidential. To help ensure confidentiality, surveys were only identified with a number code. This code was used to ensure that the follow-up postcard was mailed to non-respondents only and to aid in cleaning the data after computer entry.

SAMPLE

The sample included a range of sizes of organizations, both numerically and financially, located in all fifty states and Puerto Rico. The regional offices of these denominations were selected for study because they are the smallest level of religious organization that is most likely to use formal managerial techniques consistently; including cash management. Local units often do not have the economies of scale to benefit from extensive cash management, nor the number of full-time employees necessary to implement sophisticated cash management procedures.

Moreover, the larger, regional organizations are more likely to have a more clearly defined management structure and therefore a more explicit financial management plan. Finally, this level of organization often either formally sets standards for individual churches/parishes or serves informally as an example for them of how to run their own organizations. Therefore, a more complete understanding of this level of organization may indirectly lend some insight into congregation-level practices of religious non-profits.

The ability to obtain addresses for the regional offices helped determine which denominations were studied. The researcher had access to addresses for United Church of Christ offices, and two thesis committee members had access to addresses for the other two denominations. These three organizations represent a cross-section of mainline Christian denominations which together represent the majority of church members in the United States.

A recent poll (Goodrich, 1994) of 113,000 US residents found that 86% of respondents said they were Christian. It also found that more US residents claimed to be members of mainline Christian denominations than membership figures from those churches indicated, suggesting that people who were not officially members nonetheless considered themselves part of those traditions. The study, which was conducted in 1990 by the Graduate School of the City University of New York, found that the largest group of respondents affiliated themselves with the Roman Catholic Church (26%). The survey also listed the Methodists (including United Methodists and three other Methodist denominations) as one of the older mainline churches in the United States.

While the United Church of Christ (UCC) is a small denomination, widely scattered across the United States, it too is one of the older churches in the country. Even though the UCC was formed only thirty years ago through the merger of the Evangelical & Reformed Church and the Congregational Church, the Congregational faith has a long history. Indeed, it was practiced by the Pilgrims who travelled on the *Mayflower* and landed at Plymouth, Massachusetts in the early 1600's. The UCC, while small, is representative of mainline Protestant denominations in the United States.

The universe of two of the denominations, the United Church of Christ and the United Methodist Church, is sufficiently small to warrant inclusion of all regional offices in the sample. Therefore, the study represents a census of those two denominations. The Roman Catholic Church in the United States, however, is comprised of 142 dioceses (the Catholic equivalent of regional offices). A sample of 80 dioceses (representing 56% of the total) was selected by first alphabetically ordering the dioceses, and then generating a random list of numbers 1 through 142. The first 80 numbers from that random list were used to select the 80 dioceses from the alphabetized list. A review of those dioceses selected and not selected did not reveal any geographic bias.

CODING & RECODING

Data were entered into NCSS using the codebook, which appears as Appendix B. These original variables were numbered one through one hundred fifty. Many variables were then recoded and combined to facilitate analysis, and therefore have variable numbers greater than one hundred fifty. The bulk of the recoded variables simply changed a zero entry (signifying No Answer to the question) to a missing value for questions involving cash management techniques. These new variables (numbered 157 to 190) were also next to each other in the database to facilitate the ranking and cumulative scoring process. Recoding of the remaining variables was performed according to the information found in the codebook, and usually involved grouping or transforming the responses to facilitate analysis. Some of these variables were not used in the final statistical analyses but remain in the codebook so as to provide complete documentation.

The number of cash management procedures each organization used was determined by yes/no answers to question numbers nineteen through forty-eight in the survey. A total of thirty-eight yes responses were possible. The actual number of positive responses was coded as the variable USAGE. Responses to these technique-usage questions (numbers nineteen through forty-eight) were also coded following the procedure discussed below in the *Index* subsection.

The level of education of the financial staff was determined from responses to survey question forty-nine. Educational experience under the Bachelor's level was coded a one, a Bachelor's degree or a CPA designation was coded a two, and education beyond the Bachelor's level was coded a three. These codes were then added together for the first three positions listed in the response to the survey question (only a handful of respondents provided information on more than three positions), and named CUMED2.

ANALYSIS

Particular methodological procedures used during the analysis of each of the objectives introduced in the first chapter are described below.

Objective 1 Methodolgy: Identifying Extent of Cash Management Usage

Frequency results were computed for each of the yes/no variables correlating with survey questions relating to cash management technique usage. A one sample proportion test was performed on each variable with a hypothesis proportion of .5 (since the only possible answers were yes or no) to determine significance.

Cross-tabulations and Chi-Square statistics were computed for relationships between various demographic characteristics and denomination to determine significant differences between denominations. To facilitate this analysis, the variable CUMED2 was recoded as RCUMED23 by dividing the range of values into three groups of roughly eaqual size (1-4, 5, 6-8), and as RCUMED22 by dividing the range of values into two roughly equal size groups (1-4, 5-8).

Other variables recoded to facilitate cross-tab and Chi-Square analysis included: FTEEMPLY into RFTEEMPL (<10, $10<25$, ≥ 25) and RFTEEMP2 (<25, ≥ 25); FTEFIN into RFTEFIN (≤ 3, 4-5, ≥ 6) and RFTEFIN2 (≤ 3, ≥ 4); AGE into RAGE (1-31, 32-120, >120), and NUMLOCAL into RNUMLOC2 (1-175, >175). BUDGET was first recoded into BDGT100K by dividing BUDGET by 100,000, to reduce the scale of the responses. This was necessary due to the large size of the budgets in relationship to the index scale (regression analysis could not withstand the differences in the order of magnitude between the two variables). BDGT100K was then recoded into BGTK3GRP (1-25, 25.1-60,60.1-190) to facilitate cross-tab and Chi-Square analysis.

Objective 2 Methodology:

Index Construction

Cash management techniques were divided into seven categories to create the index, as illustrated in Table 3: *Cash Management Categories*. These categories differentiate the techniques by relative sophistication and were grouped by patterns of usage. Techniques that are commonly used together were placed in the same category (such as internal controls). These categories and the placement of the techniques within them were developed after reviewing the public and non-profit financial management literature and together represent a new approach to analyzing cash management implementation.

Weighting

Within each category, techniques were weighted based on their importance and sophistication relative to others in that category, as shown in Table 4: *Cash Management Categories, Weights, and Variables*. Each variable in the Table represents a yes/no question about the organization's usage of that cash management technique. A yes answer was coded 1, and a no answer was coded 0. The sum of techniques in each category is one, and the sum of all seven categories is ten (due to the weighting of each category). Therefore, if an organization used all of the techniques (none did), it would receive an index rating of 10.

Weights of the categories represent the relative sophistication of expertise necessary to employ techniques within each category. Weights of variables within categories represent the relative importance/significance of that procedure vis-a-vis others in that category. Comparisons among variables in different categories should not be made. Weights were assigned by the researcher after reviewing the literature and were then reviewed and modified by a panel of experts. The panel consisted of two thesis committee members who were familiar with both the literature and practice of cash management.

Table 3: Cash Management Categories

Group	Category	Description	Techniques (variable names in all caps)
1	Basic	Organizations of any size can use these basic and straightforward techniques to control their cash.	• DEPOSIT cash daily • Delay paying BILLS until due date • CHECKING and SAVING accounts earn interest • Keep money in saving vs checking account (CSHSAV)
2	Investments - Simple	These techniques, while important, are common and relatively easy to use. They are the basic investment instruments that can be used for temporarily idle funds.	• SAVINGs account • NOW or money market account • Certificate of deposit (CD) • Investment account that is managed by a bank or firm (INVTACCT)
3	Increase Cash (internal)	These represent ways an organization can relatively easily increase the amount of cash it has on hand at any given time.	• Send reminders to churches and customers for pledges and bills due (REMNDCH & REMNDSV) • Purchase on CREDIT as often as possible • Take advantage of discounts as often as possible (CSHDISC & QUANTDISC) • SCHEDULE cash disbursements (such as payroll)
4	Increase Cash (external)	These bank-provided services are other ways an organization can increase the amount of cash it has on hand.	• Cash management services offered by banks, such as lock boxes and zero-balance accounts. (BANKSERV) • Use WIRE transfers as often as possible
5	Internal Controls	Internal Controls are techniques that improve the safety and reliability of cash transactions, and thus are important for an organization's long term health. They do not, however, directly enhance an organization's cash position.	• A designated MANAGER for cash management responsibilities • Written GUIDELINES for cash management procedures • More than one person responsible for cash transactions (CASHTRANS) • Non-bookkeeper responsible for petty cash (PTTYCSH) and bank statement reconciliation (RECONCL) • Use sequentially numbered checks (NUMCHKS) • Two signatures required for all checks written (TWOSIGN) • Fidelity insurance (FIDEL)
6	Cash Budgeting	Techniques in this category are the basis for comprehensive cash management that enhances an organization's cash position.	• Prepares cash budgets on a regular basis (CSHBDGT) • Accounting system provides regular information about the organization's cash position (CSHPOS) • Establishes a minimum balance (MINBAL) • Knows the bank's minimum compensating balance (COMPBAL)
7	Investments - Advanced	Techniques in this category are peculiar to the financial and cash management industry, and are complex and less well-known. These more advanced instruments can be used to invest idle funds.	• Accounting system provides regular information about the organization's investment position (INVSTPOS) • Pools cash from different funds and accounts for investment purposes (POOLCSH) • Negotiable certificate of deposit (NCD) • Repurchase agreements (REPO) • US government treasury bills (T-BILL) • US government agency securities (AGENCY) • Commercial paper (COMPAP) • Banker's acceptances (BNKACCPT)

Within the first category, weights were assigned for the following reasons. Almost all saving accounts earn interest as do most checking accounts. In today's interest rate environment, both earn almost the same return, so keeping money in one versus the other is a moot point. The most significant items that are controlled by an organization are depositing money and paying bills. Therefore, they are given the most weight.

The simple investment techniques in the second category are relatively common and accessible. NOW accounts and investment accounts managed by others are slightly more complex than simple saving accounts and CD's and are thus weighted slightly higher. In the third category, weights are evenly divided among four "groups": reminding those who owe money to the organization (with the majority to churches since these are religious nonprofits), the use of credit, scheduling disbursements, and taking advantage of discounts (split evenly between cash and quantity discounts).

Table 4: Cash Management Categories, Weights, and Variables*

Basic .5	Investments - Simple .75	Increase Cash (internal) 1	Increase Cash (external) 1.25	Internal Controls 1.5	Cash Budgeting 2.5	Investments - Advanced 2.5
.4 deposit	.3 invtacct	.17 remndch	.7 wire	.2 manager	.4 cshbdgt	.25 poolcsh
.4 bills	.3 now	.08 remndsv	.3 bankserv	.2 guidelins	.3 minbal	.15 invstpos
.1 chkng	.2 cd	.25 credit		.1 cashtrans	.2 cshpos	.15 ncd
.05 saving	.2 saving	.125 cshdisc		.1 pttycsh	.1 compbal	.1 repo
.05 cshsav		.125 quantdisc		.1 numchks		.05 t-bill
		.25 schedul		.1 reconcl		.05 agency
				.1 twosign		.125 compap
				.1 fidel		.125 bnkaccpt

* If all groups were equal, each would weigh ~1.43, and the sum of the groups is ten. Weights within each category total one.

Wire transfers are now so widespread, not only in the cash management field but beyond it to the general public as well, that they are given most of the weight in the fourth category. (Indeed, wire transfers could belong in the basic category, but since they must still be provided by a bank (or other financial organization, such as Western Union) they are included in this category). Other bank services, such as lock boxes and warrants, receive the remainder of this category's weight.

In the Internal Controls category, having one person responsible for cash management indicates seriousness about cash management as do written guidelines. Such policies also suggest thoughtfulness on the part of management (as they have had to think through the financial process) and a likelihood that things will get done. These two variables are therefore given more weight than the other individual internal control components that are fairly easy to implement in a piecemeal fashion.

Cash management is significantly hindered without budgets. In such cases, cash position is meaningless since there is no standard against which to judge such a position. Therefore, budgets receive the highest weight in the sixth category. Minimum balance is also important to a cash management system and therefore receives the next highest weight. Knowledge about an organization's cash position is more critical than knowing the bank's compensating balance, particularly for non-profit organizations (for whom banks will often be more lenient regarding charges and fees than private-sector customers).

Organizations with cash management programs that do not include cash budgeting are more effective at managing their cash than organizations who do not even have a cash management program at all. However, the degree of success in enhancing its financial position is greatest for an organization that does have a cash management program and prepares cash budgets. This relationship can be thought of as a continuum similar to the continuum created by the index with no cash budgeting at the low end and daily cash budgeting at the high end.

In the final category, pooling cash is essential to increasing financial returns, and thus receives the greatest weight. Negotiable CDs and information regarding the organization's investment position are the next most sophisticated, and receive the next highest weights. Commercial paper and banker's acceptances are the next most sophisticated. Repurchase agreements are used today only in large denominations due to instability in this market during the 1980s. US Treasury Bills and US Agency Securities provide tax-free benefits which are useless to tax-exempt non-profits and are therefore given little weight.

In summary, the index provides a means to rank organizations on a scale founded upon the sophistication of their cash management program. This index facilitates comparison of cash management usage between organizations and sectors, which will in turn allow for the closing of the gap between the prescribed processes found in the literature and the actual processes employed in the field. Such an understanding will add measurably not only to the body of knowledge in the cash management literature but will also aid in the better use of limited resources in the third sector.

Objective 3 Methodology:
Identifying Variables Associated with Usage

Variables used in these analyses included NUMLOCAL, RBUDGET, USAGE and INDEX. Since these variables all involve ratio data, regression analyses were used. All procedures were performed for the data as a whole, and again for each denomination by using the variable DENOM as the filter.

Scatter plots were first prepared and analyzed to determine if a relationship among the variables and cash management usage might exist, and if so if it appeared to be linear. Scatter plots also indicated outliers, which were removed for the regression analysis. Residual plots were then analyzed to ensure that no clear pattern existed, and that the plots appeared random. Finally, a set of normal probability plots was produced and analyzed to test whether the residuals were in fact normally distributed.

Logically, a curvilinear function could best describe the variables USAGE and INDEX, but residual plots did not conclusively show such a pattern (nor did they conclusively deny the existence of such a pattern). To ascertain if a curvilinear relationship existed between these variables, the variables USAG_LOG, USAG_EXP, INDX_LOG, and INDX_EXP were used in the analyses. The logistic equation used was $y' = \ln((\lambda / y) - 1)$, and the exponential transformation function was $y' = \ln(\lambda - y)$.

Regression was performed once all of the assumptions for regression were verified as holding true for these variables. Correlations were analyzed to determine if multiple variables were actually measuring the same phenomenon. Levels of significance were determined from regression reports using t-tests and f-ratios. R-squared results provided a measure of the relationships' strengths.

To facilitate cross-tab and Chi-Square analysis between cash management usage and sophistication, and the number of employees (both total and financial), USAGE was grouped into USAG2GRP (1-22, ≥ 23), and INDEX was grouped into INDX2GRP (≤ 5.75, > 5.75) and INDX3GRP (≤ 5, 5.1 - 6.25, > 6.25).

Objective 4 Methodology: Partial Replication of the Zietlow Predictive Model

In Zietlow's study (1988), use of cash management techniques was coded 0 and non-use as 1. These responses were coded in the opposite manner for this research (use as 1, non-use as 0), so the sign of expected coefficients was reversed in the two studies. The current coding was designed to work with the index described above. That approach necessitated using a code of one for technique use.

Since two of the three dependent variables in the model were dichotomous, multiple regression was not the appropriate statistical vehicle to use in this analysis. Regression was used for the one ratio-data variable (USAGE), and discriminate analysis was used for the other two variables (RWIRE and RCSHBDGT). Discriminate analysis provides similar statistical results to regression by providing alpha and beta coefficients for a "best fit" line between the two variables studied (Kleinbaum & Kupper, 1978:415). However, discriminate analysis allows for the dependent variable to be nominal, which is the present case. (The original study used probit regression, which also allows for a dichotomous dependent variable. This researcher could not obtain a statistical package containing probit regression, given time constraints, and discriminate analysis was deemed adequate given the scope of the project.)

CHAPTER 4

FINDINGS

INTRODUCTION

This chapter discusses the results of this research. It is organized along the four main objectives of the study outlined in Chapter One. The first section presents the extent of cash management practiced by regional offices of the three religious denominations. This usage is then ranked, in section two, according to the index developed in Chapter Three. Patterns of both usage and sophistication are discussed as well as denominational breakdowns of organization demographics.

The third section discusses relationships between the usage and sophistication of cash management programs and organizational demographic characteristics. The last section of this chapter presents the results of a partial replication of the Zietlow predictive model and discusses the differences found between those results and the findings of the original study.

OBJECTIVE 1 RESULTS: IDENTIFYING EXTENT OF CASH MANAGEMENT USAGE

On the whole, the sample organizations used a substantial portion of the cash management techniques analyzed. A significant number of organizations (at the .05 confidence level) used most of the cash management techniques identified in the survey, as shown in Table 5: *Techniques Used by Surveyed Organizations*. Not only was the number of organizations that used the various techniques significant, but overwhelmingly so (almost all were used by more than two-thirds of the organizations surveyed and most were used by more than three-fourths of those surveyed). Indeed, only seven of the thirty-eight techniques included in the survey were not used by a significant number of organizations.

Table 5: Techniques Used by Surveyed Organizations

Basic		Investments - Simple		Increase Cash (internal)		Increase Cash (external)		Internal Controls		Cash Budgeting		Investments - Advanced	
Tech.	% Use	Tech.	% Use	Tech.	% Use	Tech.	% Use	Tech.	% Use	Tech.	% Use	Tech.	% Use
deposit*	83	invtacct	60	remndch*	94	wire	39	manager*	79	cshbdgt*	84	poolcsh*	91
bills	46	now*	63	remndsv*	75	bankserv*	61	guidelins	33	minbal	36	invstpos	52
chkng*	83	cd	50	credit	38			cashtrans*	71	cshpos	88	ncd	5
saving*	85	saving	50	cshdisc*	90			pttycsh*	59	compbal*	67	repo	26
cshsav*	75			quantdisc*	89			numchks*	99			t-bill	49
				schedul*	72			reconcl*	67			agency	30
								twosign	46			compap	18
								fidel*	87			bnkaccpt	6

* Significant at the .05 Confidence Level.

Two-thirds of the surveyed organizations used the calendar year as their fiscal year. Interestingly, however, over 80% of Catholic organizations used a July-June fiscal year, while over 80% of the UCC organizations and all Methodist organizations used the calendar year. This separation along denominational lines implies that the national levels of these faiths have suggested a fiscal year to enhance coordination among regions.

Approximately one-third of all organizations used cash accounting, one-third used full accrual accounting, and one-third used modified accrual accounting. When broken down by denomination, however, different patterns emerged. Over half of the Catholic organizations used full accrual accounting, while half of the UCC organizations and 55% of the Methodist organizations used cash accounting.

Even though the surveyed organizations used a variety of accounting methods, almost all (96%) used fund accounting. This may be related to the kind of organization surveyed, i.e. regional offices of religious non-profits. These organizations act as a middle-layer between the local congregations and the national and international offices of the denomination. As such, they often collect money from the local churches and pass it through to the national or international level. They also provide many services on their own, frequently using resources from wealthy congregations to help subsidize poorer congregations. All this money for all these different functions must be tracked and fund accounting provides an efficient means by which to do so. By using funds, organizations are able also to track monies donated by members for specific purposes and thereby maintain accountability to those members.

Other survey results are highlighted in Table 6: *Organizational Demographics: Denominational Differences*. There were significant differences among denominations with respect to the number of local congregations represented by the organizations, the age of the organizations, the size of their annual budgets, and the number of organization employees (both total employees and the number of staff involved in everyday financial transactions).

Table 6: Organizational Demographics: Denominational Differences

Variable	Response Ranges	Denomination Responses (Percent)			
		Catholic	UCC	Methodist	Combined
Number of Local Congregations*	1 - 175	90	44	12	49
	> 175	10	56	88	50
Age of Organization (in years)*	1 - 31	25	66	26	33
	32 - 120	45	17	26	32
	> 120	30	17	48	35
Annual Budget (in millions)*	.1-2.5	31	94	8	33
	2.51-6.0	43	6	40	34
	6.01-19.0	26	0	52	33
Number of FTE (financial employees)*	≤ 3	33	94	50	51
	≥ 4	67	6	50	49
Number of FTE (total employees)*	< 25	18	78	50	42
	≥ 25	82	22	50	58
Fiscal Year*	Calendar	10	82	100	61
	July-June	82	6	0	34
	Other	8	12	0	5
Accounting System Used*	Cash	10	50	56	36
	Mod. Accrual	51	22	10	29
	Accrual	39	28	34	35
Cumulative education level of top three financial staff (codes)†	< 10	33	53	48	42
	≥ 10	67	47	52	58

* Significant differences between denominations at the .01 confidence level.
† Coding as follows: 1=HS, 2=Assoc. Deg, 3=BA/CPA, 4=MA/MBA/MDIV, 5=PhD.

These differences illustrate that there are structural variations between organizations along denominational lines, and suggest that there might be differences in their cash management practices as well. Such cash management differences will be analyzed below.

While this research purposely did not analyze geographic variables (since no direct link between geography and cash management could be hypothesized), it did ensure that all three denominations surveyed were national with offices from all regions of the United States. A cursory review of returned surveys did not reveal any geographic bias in the response rate. A spatial variable that might have a relationship to financial management is that of rural versus urban location.

Volunteer board members with financial oversight responsibilities are more likely to be well versed in current management theory and practice in urban centers compared to those living in rural towns. The urban centers foster the development of management innovations which then "trickle down" to rural areas. Since the present study focused on regional offices located in primarily urban centers, this rural/urban variable was presumed to have a negligible effect on these organizations. However, if further research into local level congregations' financial management practices is pursued, this rural/urban variable should be analyzed closely, since such congregations are widely dispersed between rural and urban areas.

OBJECTIVE 2 RESULTS: THE INDEX

On the whole, all organizations combined had an average sophistication index of 5.71, with a standard deviation of 1.45. These index results were normally distributed. These results reflect and are similar to the total number of techniques organizations used. On average, organizations used almost three-fifths of the techniques included in the survey (58%).

Non-use of advanced investment vehicles contributed to the mediocre sophistication scores. As shown in Table 5 above, only one of the eight techniques in this category was used by a significant number of organizations. Actually, five of the techniques were NOT used by a significant number of organizations. In other words, the survey results for only two of these techniques could have happened by chance. The remaining results were significant at the .01 level, meaning that five of the seven techniques in this category were not used by most of the organizations -- leading to the low sophistication scores.

Another contributing factor to the low sophistication scores was the lack of having a minimum balance. Two-thirds of the surveyed organizations did not have an internal minimum cash balance established. When combined with the lack of using advanced investments, 2.6 out of a possible 10 points is subtracted, resulting in a possible high score of only 7.4.

Nevertheless, the index scores revealed that there are significant differences among denominations with respect to sophistication. Table 7: *Index Ratings by Denomination* illustrates the differences among these denominations which resulted in a calculated Chi-Square of 10.28, for a 3 x 3 table with four degrees of freedom, indicating a significance level of 0.05.

Table 7: Index Ratings by Denomination*

Denom \Index Scores	.5 - 5	5.1 - 6.25	6.26 - 10	Total
Catholic	10	14	18	42
Mean = 6.14	23.8%	33.3%	42.9%	100%
UCC	11	2	5	18
Mean = 5.02	61.1%	11.1%	27.8%	100%
Methodist	13	17	12	42
Mean = 5.57	31%	40.5%	28.5%	100%
Total	34	33	35	102
Mean = 5.71	33.3%	32.4%	34.3%	100%

* Chi-Square for DENOM vs INDX3GRP w/ 4 df = 10.28, p=0.05

The mean for all denominations combined, as mentioned above, was 5.71. The mean for Roman Catholic organizations was 6.14 while for UCC organizations it was only 5.02. United Methodist organizations had a mean index rating of 5.57. The difference between the Catholic and UCC results was significant at the 0.01 level while that between the Catholic and the Methodist results was significant at the 0.05 level. Index score differences between UCC and Methodist organizations were significant at the 0.1 level.

There are obviously differences among denominations that lead to the differences in cash management usage. Since there are significant differences among denominations along a number of demographic characteristics, the researcher hypotheses that these demographic differences are positively related to the sophistication differences. As discussed in Chapter Two, these demographic characteristics are closely linked to the opportunity cost calculations that underpin cash management implementation decisions. The next section explores these characteristics and suggests that they are indeed related to implementation differences among denominations. It also explains whether these characteristics are related to cash management implementation regardless of denomination.

OBJECTIVE 3 RESULTS: IDENTIFY VARIABLES ASSOCIATED WITH CASH MANAGEMENT USAGE

Accounting System

As discussed above, different denominations use different types of accounting systems. Additionally, different denominations had significantly different sophistication index ratings. When these two variables are analyzed together (Index score and Accounting system), a correlating pattern emerges. As shown in Table 8: *Accounting Systems Used by Index Scores*, organizations with more sophisticated cash management procedures tended to use Full Accrual accounting, while those with less sophisticated procedures used Modified Accrual or Cash accounting. This trend was significant at the 0.05 level. This correlation was anticipated given that Full Accrual accounting is much more sophisticated than Cash accounting.

Table 8: Accounting System Used by Index Score*

# Using Acct'g Sys. (row %)	Index Score 0.1 - 5	5.1 - 6.25	6.26 - 10	Total
Cash	12 (33.3)	15 (41.7)	9 (25.0)	36 (100)
Modified Accrual	17 (48.6)	8 (22.9)	10 (28.6)	35 (100)
Full Accrual	5 (17.2)	10 (34.5)	14 (48.3)	29 (100)
Total	34 (34)	33 (33)	33 (33)	100 (100)

* Chi-Square for ACCTSYS vs INDX3GRP w/ 4 df = 9.47, p=0.05

Since accounting systems differ between denominations, index scores differ among denominations, and accounting systems differ among index scores. The relationship among index scores and accounting systems is not bound by differences between denominations. In other words, the relationship between cash management sophistication and type of accounting system does not rely upon denominational factors. Unfortunately, due to the limited size of the sample, this relationship could not be tested within each denomination (the expected frequencies fall well below five when denomination is used as a filter in Table 8).

Membership Size

Another hypothesized relationship is that organizations with higher membership size (as measured by the number of member congregations) would employ a higher number of cash management techniques. Survey data did not bear out this hypothesis. Regression analysis revealed that no relationships existed between the number of local congregations represented by surveyed organizations (NUMLOCAL) and their sophistication ranking (INDEX) or total number of techniques used (USAGE). (See Table 14: *Membership Size Relationships* in Appendix E.)

However, there was a significant relationship between NUMLOCAL and both INDEX and USAGE for the Methodist organizations. Using one tailed t-tests, the number of Methodist member congregations and the level of cash management sophistication were both positively related to the number of cash management techniques used by Methodist organizations at the 0.025 level of significance. However, these relationships were not strong, since only approximately 10% of the change in either cash management usage or sophistication was explained by the number of member congregations.

Since both INDEX and USAGE are variables that increase to an upper limit (10 and 38 respectively), they were transformed using an exponential to a limit function, and the analysis was re-run. No differences were found between the original results and the second run, suggesting that the relationships discussed above are linear. Indeed, residual plots showed further deviation from standard regression assumptions when using the transformed variables than with the original variables.

A potential reason why the number of members only partially explained the variance of cash management use in Methodist organizations might be the distribution of responses regarding the number of members. (See Table 15: *Membership Size by Denomination* in Appendix E.) The Methodist organizations have the widest range in terms of number of members of the three denominations, with a mean of 546 and a standard deviation of 314. Catholic organizations have a mean of 102 with a standard deviation of 52 and UCC organizations have a mean of 211 with a standard deviation of 122. The wide range of sizes found in the Methodist organizations may be the range necessary for this variable to have a relationship to cash management utilization. This conclusion, however, must remain conjecture until further research with larger organizations is performed.

Budget

Another expected association concerned the size of the organization's budget. It was anticipated that larger budgets would be related to higher overall use of cash management techniques, as well as higher sophistication of use. These relationships were indeed found, and were significant, at the 0.025 confidence level, for both overall usage and for sophistication (see Table 9: *Budget Relationships*).

Table 9: Budget Relationships

	Independent Variable: Budget Size (one-tailed T-test values)			
Dependent Variable	Catholic	UCC	Methodist	Combined
Overall Usage	1.48*	0.92	1.53*	2.14†
Sophistication Index	1.64*	0.61	1.68**	2.29†

* p = 0.1; ** p = 0.05; † p = 0.025

Again, both the usage score and the sophistication index variables are not necessarily linear, since they both have upper limits. Budget size was regressed by both logistically transformed and exponentially transformed data from both usage and index variables. The results from these analyses suggested that the relationships among the original data were indeed linear, as the new relationships (as tested by residual analysis) showed extreme variation from regression assumptions.

To ensure that the relationships between budget size and cash management usage and sophistication were not explained simply by differences between denominations for all three variables, regression analysis was conducted using denomination as a filter. Again, significant relationships between budget size and both usage and sophistication were found. Catholic denominations showed significant relationships at the 0.1 confidence level, and Methodist denominations showed significant relationships at the 0.1 and 0.05 confidence levels (see Table 9 above). These results indicate that budget size does indeed have a positive relationship with both the extent and relative sophistication of cash management implementation.

Staff Size and Professionalism

A fourth posited relationship was between the size and level of professionalism of the organizations' staff and cash management usage and sophistication. Professionalization was measured by education level, which is a useful and easy to measure proxy. As highlighted in Table 10: *Staff Size Relationships* below, organizations with more employees (both total and financial) used significantly more cash management techniques than those organizations with fewer employees (at the .025 confidence level). Similarly, organizations with more paid workers had more sophisticated cash management programs, with confidence levels at .05 for financial workers and .025 for total employees.

Table 10: Staff Size Relationships

	Independent Variable (chi-square value)	
Dependent Variable	FTE Employees	FTE Financial
Overall Usage	5.61*	5.84*
Sophistication Index	8.32*	7.24**

* p=0.025; ** p=0.05

Analysis of these relationships at the denominational level could not be performed, since the size of staffs was so different among denominations. Catholic organizations had much larger staffs than UCC organizations. Therefore, when the staff responses were divided into two groups for analysis, most UCC organizations were in the low group, and most Catholic organizations were in the high group. This led to expected frequencies in the cross-tabs of less than five, voiding the reliability of the Chi-Square test. This phenomenon suggests that the correlations only existed between denominations as groups. In other words, Catholic organizations had generally larger financial staffs and used generally more cash management techniques than UCC organizations. Direct correlations between staff size and cash management use cannot be drawn.

Organizations in which the financial staff had higher education levels used significantly more cash management techniques, and used more sophisticated techniques (both at the 0.1

confidence level), than organizations with less educated financial staff. However, these relationships were not found to hold true when analyzed at the denominational level. These results are summarized in Table 11: *Staff Professionalism Relationships*. In the case of education levels, the distribution of responses did not erode the validity of the Chi-Square test (except for the UCC due to the small sample size). Instead, the tests were valid, and the results did not support the hypothesis. Again, these results suggest that differences found may be explained by inherent differences between denominations and not due to any relationship between education levels and cash management usage.

Table 11: Staff Professionalism Relationships

	Cumulative education level of top three employees (chi-square values)			
Dependent Variable	Catholic	UCC	Methodist	Combined
Overall Usage	3.01*	†	1.53	3.34*
Sophistication Index	3.07	†	6.47**	5.54*

† UCC tables were not valid due to a low N size. * p=0.1, ** p=0.05

OBJECTIVE 4 RESULTS: PARTIAL REPLICATION OF ZIETLOW PREDICTIVE MODEL

Zietlow (1985) collected information on some cash management techniques that were not included in this study and this study collected data that Zietlow did not. Therefore, total replication of the study could not be achieved. Nor was duplication of his study the primary purpose of this research. Indeed, as discussed in chapter two, this research approaches cash management in the non-profit sector in a fundamentally different manner than Zietlow did. However, enough overlap exists to replicate part of Zietlow's study. Both analyses obtained information about wire transfer usage and cash budget preparation. Both studies also compiled a cumulative score or proportion of cash management usage.

However, this study did not reach the same conclusion about the predictive powers of age, size of the organization, and education of the chief financial officer as Zietlow did in his work (1988). In fact, none of those variables was found in the present study to be related significantly to the use of wire transfers or cash budgets or to the total number of techniques used. Table 12: *Predictive Model - Statistical Results* provides the results of the partial replication of the Zietlow model with data from this study.

Table 12: Predictive Model - Statistical Results

Cash Management Technique [Variable Names in Caps]	Independent Variables: F-Ratio Values* (significance level) Age [AGE]	Size [NUMLOCAL]	Education of CFO [POSAEDUC]
Wire Transfer [RWIRE]	0.1 (0.8)	0.0 (1)	0.3 (0.6)
Cash Budget [RCSHBDGT]	0.6 (0.4)	0.7 (0.4)	0.3 (0.6)
Overall Cash Management Usage [USAGE]	0.56† (0.6)	0.41† (0.7)	0.15† (0.9)

* Methodology: Discriminate Analysis
† Methodology: Simple Regression (values are t-values, not F-Ratios).

Intercorrelations between variables were checked to ensure that each independent variable was measuring a different phenomenon. All correlations were below 0.31, well within accepted parameters indicating variable independence. As a further check, unpaired t-tests were calculated for each variable, using use and non-use of each technique as the population parameters. Again, no significant differences were found.

No differences were found even though there were significant differences of technique usage between denominations for both overall usage and wire transfers. (see Table 13: *Predictive Model - Denominational Differences*). There were also significant differences between denominations for the age and size of organization variables as shown earlier in Table 6. The lack of correlations between technique usage and these variables despite denominational differences indicates that the differences are denominationally driven. Indeed, the differences in the variables themselves are driven by inherent characteristics of the denominations.

Table 13: Predictive Model - Denominational Differences

	Catholic	UCC	Methodist	Combined
Use Wire Transfers*	50%	17%	36%	38%
Prepare Cash Budgets	83%	89%	83%	84%
Mean Number of Techniques Used† (standard deviation)	23.83 (4.34)	19.78 (4.54)	21.79 (4.44)	22.27 (4.62)

* Differences among denominations significant at the 0.05 level.

† Total number of techniques possible was 38. Differences between Catholic & Methodist significant at the 0.025 level; between Catholic & UCC at the 0.01 level; between UCC & Methodist at the 0.1 level.

Zietlow's study focused on organizations all within one structural framework: members of the Interdenominational Foreign Missions Association. This narrow focus undoubtedly contributed to the high predictive ability of these three variables (age, size, and education of CFO). By focusing on a broader sample of the religious subsector, this study finds reasons to be skeptical of these variables' predictive power in terms of cash management implementation in organizations other than those in the original study.

CHAPTER 5

CONCLUSIONS

This study has shown that a sample of main line denominations' regional offices within the religious non-profit subsector employs a variety of cash management techniques ranging from simply depositing incoming money daily to preparing cash budgets and investing temporarily idle funds. Since this is an early study of the religious subsector's cash management practices, these results are significant. They indicate that the third sector's financial management practices may not be far behind those of the public and private sectors. Indeed, the same forces that prompted the public sector's increased usage of financial management (a decrease in federal support, high inflation during the late 1970's, and increased awareness of the need for social services in the 1980's) have affected the nonprofit sector as well. Therefore, these results are not surprising.

As discussed in Chapter Four, the results from the sophistication index closely paralleled the results from the simple cumulative addition of cash management techniques used. The mean index score was 5.71 (on a scale of one to ten) while the average organization used 58% of the cash management techniques included in the survey. These results are not significantly different from each other. They do, however, illustrate that such a ranking is possible to perform, and that results from such rankings do correlate to the real world environments they represent.

The lack of difference, however, does indicate that further refinement of the index is needed for it to be a truly useful measurement tool. A more robust process must be employed to determine the appropriate index weights, utilizing the knowledge of a much larger panel of cash management experts. The development of the index should also proceed through several iterations of testing to fine tune the relative weights. This testing should ideally be conducted on a wide range of organizations across sectors.

The partial replication of Zietlow's predictive model (1988) resulted in findings opposite those reached in the original study. That is, this study found that the model was not able to predict cash management usage. Zietlow's study focused on organizations all within one structural framework: members of the Interdenominational Foreign Missions Association. This narrow focus undoubtedly contributed to the high predictive ability of these three variables (age, size, and education of CFO). By focusing on a broader sample of the religious subsector, this research has shown that these variables are not directly related to cash management implementation.

One implication of this study's findings is that while many cash management techniques are used by most of the organizations, the offices do not have very sophisticated cash management programs overall. This indicates that there is still room for improvement in the financial management of these religious subsector organizations. The significant sophistication differences between denominations indicate that there are no inherent subsector structural barriers to cash management implementation. Instead, implementation appears to be related to other factors.

Such factors were found to include the type of accounting system used and the size of the organization's budget (each explaining approximately 20 percent of the variance in the sophistication index). The size of the total organizational staff as well as the number of employees involved in day-to-day financial transactions also appeared to be correlated with cash management usage. Further analysis could not find this relationship to be true within denominations indicating that the relationships may be due to inherent differences between the denominations. Other organizational characteristics that were analyzed for correlations with cash management usage included organizational age, organizational size, and who determines organizational financial policy. These three variables were not significantly related to cash management implementation.

These relationships indicate that cash management is not simply a function of organizational development and evolution, but is instead a conscious focus of the organization's management. To suggest that the use of two-thirds of the cash management procedures studied is a conscious organizational decision indicates a financial management understanding in this subsector that the literature assumes does not exist. Such a suggestion is indeed significant for the development of our understanding of the religious subsector. Rather than assuming that non-profits are simple organizations without strong management knowledge, capabilities, or commitments, this study indicates that these organizations are concerned with financial management, and are reasonably performing such vital management responsibilities.

If such conclusions are drawn, then the literature does not reflect reality. The literature focuses on "how-to" guides with the assumption that financial management is a new concept to the non-profit manager. As earlier research has shown and this research has confirmed, non-profit management is concerned with financial accountability and stability and is using a wide array of tools to achieve results. The literature must focus on this use and provide suggestions on how to improve performance based on the current level of implementation and sophistication.

Conclusions from this research are limited to the religious subsector in general, and these three denominations in particular. Since these denominations are representative of the majority of religious organizations in the United States, the findings are suggestive of possible trends within the subsector as a whole. However, since the denominations were not selected in a statistically significant manner, such suggestions are simply that, suggestions.

Further research should focus on the financial management of other types of non-profit organizations, enabling comparisons between subsectors. Such comparisons would provide indications of overall third sector trends. If such findings are consistent with those found here, then broad conclusions could be drawn about the third sector as a whole. If such findings are inconsistent with these findings, then further research into the religious and companion subsectors would be warranted.

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APPENDIX A

SURVEY

The survey on the following pages is a reduced scale copy of the actual instrument mailed to respondents. The survey was printed on light green paper, double-sided, and folded in half to make a small booklet. The right hand side of the last page in this appendix was therefore positioned on the front of the booklet, and served as the introduction to the survey from the researcher.

SURVEY

This survey will take approximately 20 minutes of your time. The number you see at the top of this page will only be used to keep track of which organizations have responded. All responses will be kept confidential. If you have any questions, please call Jeff Peirce at (703) 552-0588. Thank you for your assistance.

1. Your organization is affiliated with the:
   - ☐ Roman Catholic Church
   - ☐ United Church of Christ
   - ☐ United Methodist Church

2. How old is your organization (in years)? ______________

3. How many local churches/parishes are represented in your organization? ______________

4. The total number of members represented by the local churches/parishes in your organization is approximately:
   - ☐ < 5,000
   - ☐ 5,000 - 9,999
   - ☐ 10,000 - 14,999
   - ☐ 15,000 - 19,999
   - ☐ 20,000 - 24,999
   - ☐ ≥ 25,000

5. The average size (in terms of number of members) of local churches / parishes in your organization is approximately:
   - ☐ < 200
   - ☐ 200 - 299
   - ☐ 300 - 399
   - ☐ 400 - 499
   - ☐ ≥ 500

6. How many employees (FTE)* work in your organization?
   - ☐ < 5
   - ☐ 5 - 9
   - ☐ 10 -14
   - ☐ 15 - 19
   - ☐ 20 - 24
   - ☐ ≥ 25

* To determine FTE (Full Time Equivalents), add the number of hours all employees work each week and divide by 40 (For example, two people each working 20 hrs/wk = one FTE).

The following questions focus on the overall financial system your organization uses.

7. Who determines financial <u>policy</u> in your organization?
   - ☐ a. national organization sets policy.
   - ☐ b. national organization recommends policies a local person/group adopts.
   - ☐ c. local person/group acts independently of national organization.

   If you marked b or c, please mark the appropriate local group:
   - ☐ conference minister / bishop
   - ☐ clergy board / priest council
   - ☐ lay board (general over-all organization)
   - ☐ lay board (finance committee, etc)
   - ☐ lay / clergy board
   - ☐ financial officer / treasurer
   - ☐ other (please specify): ______________________

8. The accounting system your organization uses is:
   - ☐ cash
   - ☐ full accrual
   - ☐ modified accrual

9. Please check the type of accounting you use:
- ☐ fund - (please add the number of funds you have: _______).
- ☐ cost
- ☐ modified cost
- ☐ other (please specify): ________________

10. What is your total budgeted expenditure for the current fiscal year (FY), and what is the period of your fiscal year (i.e. July - June)?

FY: ________________ $ ________________

11. In dollars, what were the following at the end of the last FY?

assets ________________
liabilities ________________
fund balance ________________

12. How many people (FTE) are involved in everyday financial procedures?
- ☐ ≤ 1
- ☐ 2 - 3
- ☐ 4 - 5
- ☐ ≥ 6

13. Do you pay your employees
- ☐ weekly
- ☐ bi-weekly
- ☐ semi-monthly
- ☐ monthly

14. How did you choose your primary bank?
- ☐ competitive bid
- ☐ member affiliation
- ☐ longstanding affiliation
- ☐ other: ________________

15. Do you re-evaluate the merits of remaining with your current bank as opposed to changing banks on a regular basis?
- ☐ no
- ☐ yes (please specify how often): ________________

16. How does your organization receive the majority of its income? (please check one)
- ☐ monthly
- ☐ quarterly
- ☐ annually
- ☐ sporadically (please explain): ________________

____

17. What is your position / title?

____

____

18. How long have you worked for this organization in your current capacity?
- ☐ < 1 year
- ☐ 1 - 3 years (started between 1990 - 1992)
- ☐ 4 - 8 years (started between 1985 - 1990)
- ☐ 9 - 13 years (started between 1980 - 1985)
- ☐ ≥ 14 years (started before 1980)

The next set of questions ask how your organization handles cash on a day-to-day basis. Please note that the questions span both pages. →

For each practice you use, please evaluate its effectiveness in helping to optimize your organization's financial position.

	YES	NO	If yes, in what year was this practice started?	Not Effective		Moderately Effective		Very Effective
19. Do you deposit incoming money daily?	☐	☐	________	1	2	3	4	5
20. Do you pay bills on the latest date possible (the due date)?	☐	☐	________	1	2	3	4	5
21. Does your checking account earn interest?	☐	☐	________	1	2	3	4	5
22. Does your saving account earn interest?	☐	☐	________	1	2	3	4	5
23. Do you keep as much cash as possible in your saving as opposed to your checking account?	☐	☐	________	1	2	3	4	5
24. Do you send regular reminders to those whom you have billed for services?	☐	☐	________	1	2	3	4	5
25. Do you send reminders to member churches / par- ishes about their pledge / cathedraticum payments?	☐	☐	________	1	2	3	4	5
26. Do you buy on credit as often as possible?	☐	☐	________	1	2	3	4	5
27. Do you take advantage of cash discounts offered by those from whom you buy things?	☐	☐	________	1	2	3	4	5
28. Do you purchase on consignment?	☐	☐	________	1	2	3	4	5
29. Do you take advantage of quantity discounts as often as is feasible?	☐	☐	________	1	2	3	4	5
30. How else do you delay/reduce what you pay for goods/services?								
________________________			________	1	2	3	4	5
________________________			________	1	2	3	4	5

	YES	NO	In what year was this practice started?	Not Effective		Moderately Effective		Very Effective
31. Do you use services offered by your bank (i.e. lock-boxes, zero-balance accounts, concentration banking, warrants)?	☐	☐	________	1	2	3	4	5
32. Do you use wire transfers on a regular basis (either when paying bills/salaries or receiving payments/donations/dues)?	☐	☐	________	1	2	3	4	5
33. Do you know the minimum compensating balance required by your bank?	☐	☐	________	1	2	3	4	5
34. Do you have an established minimum balance for cash on hand? If yes, how was it determined? ____________________	☐	☐	________	1	2	3	4	5
35. Do you pool "excess"cash from different funds for investment purposes?	☐	☐	________	1	2	3	4	5
36. Is there one person assigned responsibility for cash management?	☐	☐	________	1	2	3	4	5
37. Do you have written guidelines regarding who handles cash and how? (if yes, please enclose)	☐	☐	________	1	2	3	4	5
38. Is more than one person required by your organization to handle cash transactions?	☐	☐	________	1	2	3	4	5
39. Is someone other than the bookkeeper responsible for petty cash?	☐	☐	________	1	2	3	4	5
40. Are all monies disbursed by sequentially numbered checks?	☐	☐	________	1	2	3	4	5
41. Are bank statements mailed to someone other than the bookkeeper for reconciliation?	☐	☐	________	1	2	3	4	5

	YES	NO	In what year was this practice started?	Not Effective		Moderately Effective		Very Effective
42. Does your organization require two signatures on all checks written? (If only above a certain dollar amount, what is that amount? ______________)	☐	☐	________	1	2	3	4	5
43. Does your organization have fidelity bonding?	☐	☐	________	1	2	3	4	5
44. Do you prepare cash budgets? If yes, how often? ☐ annually ☐ monthly ☐ more frequently than monthly	☐	☐	________	1	2	3	4	5
45. Does your accounting system provide regular information concerning your organization's cash position?	☐	☐	________	1	2	3	4	5
46. Does your accounting system provide regular information regarding investment performance?	☐	☐	________	1	2	3	4	5
47. Do you schedule disbursements to ensure maximum cash availability?	☐	☐	________	1	2	3	4	5

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48. Please check all the investment vehicles you use for your organization's "excess" cash (please add the average interest rate (APR) you receive for each type you currently use).

	average APR
☐ savings account	__________
☐ Money market / NOW accounts	__________
☐ Certificates of deposits	__________
☐ Negotiable certificates of deposits	__________
☐ Repurchase agreements	__________
☐ U.S. Treasury securities	__________
☐ U.S. Agency securities	__________
☐ Commercial Paper	__________
☐ Banker's acceptances	__________
☐ 'Investment account' managed by bank/firm	__________
☐ Other (specify):____________________	__________

Just one more question on the back!

49. By title, please identify the people responsible for your organization's financial oversight and the handling of its cash on a day-to-day basis. Please also include the highest education level earned by each person (Educ), the field in which the person has studied (Field), the number of years they have been in the financial field (Fin), and the number of years they have worked for your organization (Work).

Position	Educ	Field	Fin	Work

Please include a copy of your organization's latest financial statement when you return this survey to Jeff Peirce, PO Box 11613, Blacksburg VA, 24062-1613. Thank you for your time and cooperation.

November 1, 1993

Greetings!

Cash management is a topic that is often discussed in the business and public sectors of our society. There is even a bimonthly publication focusing on the subject in the private sector (*The Journal of Cash Management*). However, not much is known about how non-profit organizations manage their cash.

Religious organizations form the backbone of the non-profit sector. Indeed, recent surveys have shown that almost two-thirds of individual charitable giving in the United States has been donated to religious institutions. Therefore, a logical point of beginning for the study of non-profit cash management is with the religious subsector.

I am working toward a masters degree in public affairs & policy (called Urban Affairs) at Virginia Polytechnic Institute & State University. This survey represents the data collection portion of my thesis: *Cash Management in Religiously Affiliated Non-Profits*. My goal is to provide a portrait of the adoption and relative sophistication of cash management utilization in a sample of religious organizations.

I would greatly appreciate your help in this process. If you could fill out the survey, which begins on the next page, before Friday, November 19, I will be able to analyze the data before I begin writing my thesis in January. If you are not the best person to complete this survey, please forward it to the person who is.

Thank you for your assistance!

Jeffrey R. Peirce

APPENDIX B

CODEBOOK

Var#	Variable Name	Q #	Description		Values & Labels
1	DENOM	1	Denomination of the Organization	0	No Answer
				1	Roman Catholic
				2	United Church of Christ
				3	United Methodist
2	AGE	2	Age of the Organization	0	No Answer
3	NUMLOCAL	3	Number of Local Congregations in the Organization	0	No Answer
4	TOTMEM	4	Number of Total Members Represented in the Organization	0	No Answer
				1	< 5,000
				2	5,000 - 9,999
				3	10,000 - 14,999
				4	15,000 - 19,999
				5	20,000 - 24,999
				6	≥ 25,000
5	AVELOCAL	5	Average Size of Local Congregations	0	No Answer
				1	< 200
				2	200 - 299
				3	300 - 399
				4	400 - 499
				5	≥ 500
6	FTEEMPLY	6	Number of FTE Employees in Organization	0	No Answer
				1	< 5
				2	5 - 9
				3	10 - 14
				4	15 - 19
				5	20 - 24
				6	≥ 25
7	POLICY	7	Who Sets Financial Policy	0	No Answer
				1	National Sets Policy
				2	National Recommends Policy
				3	Local Acts Independently
8	LOCALGRP	7	Local Group Responsible for Financial Decisions	0	No Answer
				1	Conference Minister / Bishop
				2	Clergy Board / Priest Council
				3	Lay Board (general)
				4	Lay Board (finance)
				5	Lay / Clergy Board
				6	Financial Officer / Treasurer
				7	Annual Conference

Var#	Variable Name	Q #	Description	Values & Labels	
9	ACCTSYS	8	Accounting System Used	0	No Answer
				1	Cash
				2	Full Accrual
				3	Modified Accrual
10	ACCTTYPE	9	Accounting Type	0	No Answer
				1	Fund
				2	Cost
				3	Modified Cost
				9	Departmental
11	NUMFUNDS	9	Number of Funds Used	0	No Answer
12	FY	10	Fiscal Year	0	No Answer
				1	Calendar year
				2	July - June
				3	Sept - Aug
				4	Nov - Oct
				5	Feb - Jan
				6	Jan 11 - Jan 10
13	BUDGET	10	Total Budgeted Expenditures for the Current FY	0	No Answer
14	ASSETS	11	Assets at End of Last FY	0	No Answer
15	LIABIL	11	Liabilities at End of Last FY	0	No Answer
16	FUNDBAL	11	Fund Balance at End of Last FY	0	No Answer
17	FTEFIN	12	Number of FTE Involved in Everyday Financial Procedures	0	No Answer
				1	≤ 1
				2	2 - 3
				3	4 - 5
				4	≥ 6
18	PAY	13	Frequency Organization Pays Employees	0	No Answer
				1	Weekly
				2	Bi-Weekly
				3	Semi-Montly
				4	Monthly
19	PICKBANK	14	How the Organization Picks a Bank	0	No Answer
				1	Competitive Bid
				2	Member Affiliation
				3	Longstanding Affiliation
				4	Provides Cash Management Servides
				5	Rotate Annually
				6	Profitability, Capital Ratio
				7	Politics
				8	Friend
				10	Size/Stability/Service Availability of Bank
				11	Nearest Location
				12	Cost/Fees
20	CHNGBANK	15	Does the Organization Re-Evaluate Picking a Bank	0	No Answer
				1	No
				2	Yes

Var#	Variable Name	Q #	Description	Values & Labels	
21	OFTNBANK	15	If Yes to 21, How Often Does it Re-Evaluate	0	No Answer
				1-90	# of Years Between Evaluations
				91	As Conditions Warrant
				92	Ongoing
				93	Quarterly
22	INCOME	16	How the Organization Receives the Majority of Its Income	0	No Answer
				1	Monthly
				2	Quarterly
				3	Annually
				4	Sporadically
				5	Daily
				6	Weekly
				7	Heavy at Christmas & Easter
23	POSITION	17	Position of Survey Respondent	0	No Answer
				1	Treasurer
				2	Fiscal Officer
				3	Finance Officer / Manager / Financial Administrator
				4	Conference President
				5	Comptroller
				6	Director of Finance
				7	Business Manager / Director of Administrative Services
				8	Vicar for Financial Administration
				9	Controller
				10	Administrator
				11	Assistant Controller
				12	Auditor
				13	Director of Budgeting & Finance
				14	Director of Accounting
				15	Conference Minister
				16	Financial Secretary / Bookeeper
24	YRSWORKD	18	Years Respondent Has Worked for Organization	0	No Answer
				1	< 1
				2	1 - 3
				3	4 - 8
				4	9 - 13
				5	≥ 14
25	DEPOSITN	19	Organization Deposits Money Daily	0	No Answer
				1	Yes
				2	No
26	DEPOSITY	19	Deposit Money Daily - Year Started	0	No Answer
27	DEPOSITL	19	Deposit Money Daily - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective

Var#	Variable Name	Q #	Description	Values & Labels	
28	BILLSN	20	Organization Pays Bills on Latest Due Date	0	No Answer
				1	Yes
				2	No
29	BILLSY	20	Pays Bills on Latest Date - Year Started	0	No Answer
30	BILLSL	20	Pays Bills on Latest Date - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
31	CHKINGN	21	Organization Checking Account Earns Interest	0	No Answer
				1	Yes
				2	No
32	CHKINGY	21	Checking Acct Earns Interest - Year Started	0	No Answer
33	CHKINGL	21	Checking Acct Earns Interest - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
34	SAVINGN	22	Organization Saving Account Earns Interst	0	No Answer
				1	Yes
				2	No
35	SAVINGY	22	Saving Acct Earns Interest - Year Started	0	No Answer
36	SAVINGL	22	Saving Acct Earns Interest - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
37	CASHSAVN	23	Organization Keeps Cash in Saving vs. Checking Account	0	No Answer
				1	Yes
				2	No
38	CASHSAVY	23	Keep Cash Sav'g vs Check'g - Year Started	0	No Answer
39	CASHSAVL	23	Keep Cash Sav'g vs Check'g - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
40	REMNDSVN	24	Organization Sends Reminders - Services	0	No Answer
				1	Yes
				2	No

Var#	Variable Name	Q #	Description	Values & Labels	
41	REMNDSVY	24	Send Reminders - Service - Year Started	0	No Answer
42	REMNDSVL	24	Send Reminders - Service - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
43	REMNDCHN	25	Organization Sends Reminders - Congregations	0	No Answer
				1	Yes
				2	No
44	REMNDCHY	25	Send Reminders: Congregations - Yr Started	0	No Answer
45	REMNDCHL	25	Send Reminders: Congregations - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
46	CREDITN	26	Organization Buys on Credit as Often as Possible	0	No Answer
				1	Yes
				2	No
47	CREDITY	26	Buy on Credit - Year Started	0	No Answer
48	CREDITL	26	Buy on Credit - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
49	CSHDISCN	27	Organization Takes Advantage of Cash Discounts as Often as is Feasible	0	No Answer
				1	Yes
				2	No
50	CSHDISCY	27	Cash Discounts - Year Started	0	No Answer
51	CSHDISCL	27	Cash Discounts - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
52	CONSIGNN	28	Organization Purchases on Consignment	0	No Answer
				1	Yes
				2	No
53	CONSIGNY	28	Consignment - Year Started	0	No Answer

Var#	Variable Name	Q #	Description	Values & Labels	
54	CONSIGNL	28	Consignment - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
55	QANTDSCN	29	Organization Takes Advantage of Quantity Discounts as Often as is Feasible	0	No Answer
				1	Yes
				2	No
56	QANTDSCY	29	Quantity Discounts - Year Started	0	No Answer
57	QANTDSCL	29	Quantity Discount - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
58	OTHERN	30	Other Ways Organization Reduces Payments	0	No Answer
				1	Negotiate
				2	Competitve Bid
				3	Single Source Supply
				4	Use Credit Cards / Corporate Credit Cards
				5	Volunteers / Donations
				6	Writes Checks Once per Month
				7	Writes Checks Twice per Month
				8	Designated Purchasing Agent & Purchasing Cooperatives
				9	Maintenance Contracts
				10	Purchase from Discount Sources / Shop for Best Price
				11	Self-Insured for Property Liability and Health Insurance
				12	Declare Tax Exempt Status Whenever Purchasing Goods & Services
				13	Use Airline Affiliated Credit Cards for Purchasing - Travel is Paid for by Paying Other Bills
59	OTHERY	30	Other Ways - Year Started	0	No Answer
60	OTHERL	30	Other Ways - Effectivenss	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
61	BANKSRVN	31	Organization Uses Bank Services	0	No Answer
				1	Yes
				2	No
62	BANKSRVY	31	Use Bank Services - Year Started	0	No Answer

Var#	Variable Name	Q #	Description	Values & Labels	
63	BANKSRVL	31	Use Bank Services - Effectivenss	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
64	WIREN	32	Organization uses Wire Transfers on a Regular Basis	0	No Answer
				1	Yes
				2	No
65	WIREY	32	Use Wire Transfers - Year Started	0	No Answer
66	WIREL	32	Use Wire Teransfer - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
67	COMPBALN	33	Organization Knows Bank's Required Compensating Balance	0	No Answer
				1	Yes
				2	No
68	COMPBALY	33	Compensating Balance - Year Started	0	No Answer
69	COMPBALL	33	Compensating Balance - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
70	MINBALN	34	Organization Has Established a Minimum Balance	0	No Answer
				1	Yes
				2	No
71	MINBALY	34	Minimum Balance - Year Started	0	No Answer
72	MINBALL	34	Minimum Balance - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective

Var#	Variable Name	Q #	Description	Values & Labels	
73	MINBALHW	34	How Was Minimum Balance Established	0	No Answer
				1	Experience
				2	One Week's Expenditure
				3	Bank Analysis / Statement / Policy
				4	On Need
				5	Meet Bank Compensating Balance
				6	SWAG
				7	Mutual Agreement
				8	10% of Budget
				9	Payroll
				10	Frequency of Reimbursement
				11	Two Month Operating Expense
				12	Monthly Cash Needs
				13	FDIC Coverage
74	POOLCSHN	35	Organization Pools Cash for Investment	0	No Answer
				1	Yes
				2	No
75	POOLCSHY	35	Pool Cash - Year Started	0	No Answer
76	POOLCSHL	35	Pool Cash - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
77	MANAGERN	36	One Person is Assigned Cash Management Responsibility	0	No Answer
				1	Yes
				2	No
78	MANAGERY	36	Cash Manager - Year Started	0	No Answer
79	MANAGERL	36	Cash Manager - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
80	GUIDLNSN	37	Organization has Written Guidelines for Cash Management	0	No Answer
				1	Yes
				2	No
81	GUIDLNSY	37	Written Guidelines - Year Started	0	No Answer
82	GUIDLNSL	37	Written Guidelines - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
83	CSHTRNSN	38	More Than One Person Required to Handle Cash Transactions	0	No Answer
				1	Yes
				2	No
84	CSHTRNSY	38	Cash Transactions - Year Started	0	No Answer

Var#	Variable Name	Q #	Description	Values & Labels	
85	CSHTRNSL	38	Cash Transactions - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
86	PTTYCSHN	39	Someone Other Than Bookkeeper Responsible for Petty Cash	0	No Answer
				1	Yes
				2	No
87	PTTYCSHY	39	Petty Cash - Year Started	0	No Answer
88	PTTYCSHL	39	Petty Cash - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
89	NUMCHKSN	40	All Money is Disbursed by Sequentially Numbered Checks	0	No Answer
				1	Yes
				2	No
90	NUMCHKSY	40	Numbered Checks - Year Started	0	No Answer
91	NUMCHKSL	40	Numbered Checks - Effectivenss	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
92	RECONCLN	41	Someone Besides the Bookkeeper Reconciles Bank Statements	0	No Answer
				1	Yes
				2	No
93	RECONCLY	41	Reconcilliation - Year Started	0	No Answer
94	RECONCLL	41	Reconcilliation - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
95	TWOSIGN	42	Two Signatures Are Required on All Checks	0	No Answer
				1	Yes
				2	No
96	TWOSIGY	42	Two Signatures - Year Started	0	No Answer
97	TWOSIGL	42	Two Signatures - Effectivenss	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective

Var#	Variable Name	Q #	Description		Values & Labels
98	TWOSIGA	42	Dollar Amount that Triggers Two Signature Requirement	0	No Answer
99	FIDELN	43	Organization Has Fidelity Bonding	0	No Answer
				1	Yes
				2	No
100	FIDELY	43	Fidelity Bonding - Year Started	0	No Answer
101	FIDELL	43	Fidelity Bonding - Effectivenss	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
102	CSHBDGTN	44	Organization Prepares Cash Budgets	0	No Answer
				1	Yes
				2	No
103	CSHBDGTY	44	Cash Budget - Year Started	0	No Answer
104	CSHBDGTL	44	Cash Budget - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
105	BDGTOFTN	44	Frequency of Cash Budgets	0	No Answer
				1	Annually
				2	Monthly
				3	More than Monthly
106	CSHPOSN	45	Organization's Accounting System Provides Information About Cash Position	0	No Answer
				1	Yes
				2	No
107	CSHPOSY	45	Cash Position - Year Started	0	No Answer
108	CSHPOSL	45	Cash Position - Effectivenss	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
109	INVTPOSN	46	Organization's Accounting System Provides Information About Investment Position	0	No Answer
				1	Yes
				2	No
110	INVTPOSY	46	Investment Position - Year Started	0	No Answer
111	INVTPOSL	46	Investment Position - Effectivenss	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective

Var#	Variable Name	Q #	Description	Values & Labels	
112	SCHEDULN	47	Organization Schedules Disbursements	0	No Answer
				1	Yes
				2	No
113	SCHEDULY	47	Schedule Disbursements - Year Started	0	No Answer
114	SCHEDULL	47	Schedule Disbursements - Effectiveness	0	No Answer
				1	Not Effective
				2	
				3	Moderately Effective
				4	
				5	Very Effective
115	SAVING	48	Organization Uses a Saving Account	0	No Answer
				1	Yes
				2	No
116	APRSAV	48	APR of Saving Account	0	No Answer
117	NOW	48	Organization Uses a Money Market or NOW Account	0	No Answer
				1	Yes
				2	No
118	APRNOW	48	APR of NOW Account	0	No Answer
119	CD	48	Organization Has a Certificate of Deposit	0	No Answer
				1	Yes
				2	No
120	APRCD	48	APR of CD	0	No Answer
121	NEGOTCD	48	Organization Has a Negotiable Certificate of Deposit	0	No Answer
				1	Yes
				2	No
122	APRNCD	48	APR of Negotiable CD	0	No Answer
123	REPO	48	Organization Uses Repurchase Agreements	0	No Answer
				1	Yes
				2	No
124	APRREPO	48	APR of Repurchase Agreement	0	No Answer
125	TREASURY	48	Organization Uses U.S. Treasury Securities	0	No Answer
				1	Yes
				2	No
126	APRTBILL	48	APR of U.S. Treasury Securities	0	No Answer
127	AGENCY	48	Organization Uses U.S. Agency Securities	0	No Answer
				1	Yes
				2	No
128	APRABILL	48	APR of U.S. Agency Securities	0	No Answer
129	COMPAPER	48	Organization Uses Commercial Paper	0	No Answer
				1	Yes
				2	No
130	APRCOM	48	APR of Commercial Paper	0	No Answer

Var#	Variable Name	Q #	Description	Values & Labels	
131	BANKACPT	48	Organization Uses Banker's Acceptances	0	No Answer
				1	Yes
				2	No
132	APRBANK	48	APR of Banker's Acceptances	0	No Answer
133	INVSTACC	48	Organization Uses an Investment Account Managed by a Bank or Firm	0	No Answer
				1	Yes
				2	No
134	APRACCT	48	APR of Investment Account	0	No Answer
135	VHCLOTHR	48	Other Investment Vehicles Used	0	No Answer
				1	(not used)
				2	No Answer
				3	Fixed Income
				4	Pension Fund
				5	Seep Account
				6	Foundation
				7	In-House Investment of All Excess Funds
				8	Mutual Funds
				9	Financial Consultant
				10	Stocks / Bonds
				11	Government Secured Money Market
136	APROTHER	48	APR of Other Investment Vehicle	0	No Answer
137	DATRECVD		Date Survey Was Received		
138	CODE		Survey Code		
139	POSAEDUC	49	Person A - Education Level	0	No Answer
				1	High School
				2	Associates Degree
				3	Bachelor's Degree / CPA
				4	MA / MBA / MDiv
				5	PhD
140	POSAFIEL	49	Person A - Field of Study	0	No Answer
				1	Accounting
				2	Bookkeeping
				3	Physcology
				4	Computer Science
				5	Finance
				6	Theology
				7	Education
				8	Social Work
				9	Business Administration
				10	Economics
				11	Music
				12	English
				13	History
				14	Math
				15	Statistics
				16	Architecture
				17	Liberal Arts
141	POSAFIN	49	Person A - Years Worked in Financial Field	0	No Answer

Var#	Variable Name	Q #	Description	Values & Labels	
142	POSAWORK	49	Person A - Years Worked for Organization	0	No Answer
143	POSBEDUC	49	Person B - Education Level	0	No Answer
				1	High School
				2	Associates Degree
				3	Bachelor's Degree / CPA
				4	MA / MBA / MDiv
				5	PhD
144	POSBFIEL	49	Person B - Field of Study	0	No Answer
				1	Accounting
				2	Bookkeeping
				3	Physcology
				4	Computer Science
				5	Finance
				6	Theology
				7	Education
				8	Social Work
				9	Business Administration
				10	Economics
				11	Music
				12	English
				13	History
				14	Math
				15	Statistics
				16	Architecture
				17	Liberal Arts
145	POSBFIN	49	Person B - Years Worked in Financial Field	0	No Answer
146	POSBWORK	49	Person B - Years Worked for Organization	0	No Answer
147	POSCEDUC	49	Person C - Education Level	0	No Answer
				1	High School
				2	Associates Degree
				3	Bachelor's Degree / CPA
				4	MA / MBA / MDiv
				5	PhD

Var#	Variable Name	Q #	Description	Values & Labels	
148	POSCFIEL	49	Person C - Field of Study	0	No Answer
				1	Accounting
				2	Bookkeeping
				3	Physcology
				4	Computer Science
				5	Finance
				6	Theology
				7	Education
				8	Social Work
				9	Business Administration
				10	Economics
				11	Music
				12	English
				13	History
				14	Math
				15	Statistics
				16	Architecture
				17	Liberal Arts
149	POSCFIN	49	Person C - Years Worked in Financial Field	0	No Answer
150	POSCWORK	49	Person C - Years Worked for Organization	0	No Answer
151	RNUMFUND	9	recoded NUMFUND	.	No Answer / Missing Value
				1	1 - 15
				2	16 - 50
				3	≥ 51
152	RFY	10	recoded FY	.	No Answer / Missing Value
				1	Calendar year
				2	July - June
				3	Other
153	RLOCLGRP	7	recoded LOCALGRP	.	No Answer / Missing Value
				1	Professional
				2	Clergy Board
				3	Lay Board
				4	Lay / Clergy Board
154	RNUMLOCL	3	recoded NUMLOCAL	.	No Answer / Missing Value
				1	1 - 75
				2	76 - 125
				3	126 - 250
				4	251 - 500
				5	≥ 501
155	RTOTMEM	4	recoded TOTMEM	.	No Answer / Missing Value
				1	< 25,000
				2	≥ 25,000
156	RAGE	2	recoded AGE	.	No Answer / Missing Value
				1	1 - 29
				2	30 - 60
				3	61 - 170
				4	≥ 171

Var#	Variable Name	Q #	Description	Values & Labels	
157	RDEPOSIT	19	recoded DEPOSITN	.	No Answer, Missing Value, No
				1	Yes
158	RBILLS	20	recoded BILLSN	.	No Answer, Missing Value, No
				1	Yes
159	RCHKING	21	recoded CHKINGN	.	No Answer, Missing Value, No
				1	Yes
160	RSAVING	22	recoded SAVINGN	.	No Answer, Missing Value, No
				1	Yes
161	RCASHSAV	23	recoded CASHSAVN	.	No Answer, Missing Value, No
				1	Yes
162	RREMNDSV	24	recoded REMNDSVN	.	No Answer, Missing Value, No
				1	Yes
163	RREMNDCH	25	recoded REMNDCHN	.	No Answer, Missing Value, No
				1	Yes
164	RCREDIT	26	recoded CREDITN	.	No Answer, Missing Value, No
				1	Yes
165	RCSHDISC	27	recoded CSHDISCN	.	No Answer, Missing Value, No
				1	Yes
166	RCONSIGN	28	recoded CONSIGNN	.	No Answer, Missing Value, No
				1	Yes
167	RQANTDSC	29	recoded QANTDSCN	.	No Answer, Missing Value, No
				1	Yes
168	RBANKSERV	31	recoded BANKSERVN	.	No Answer, Missing Value, No
				1	Yes
169	RWIRE	32	recoded WIREN	.	No Answer, Missing Value, No
				1	Yes
170	RGUIDLNS	37	recoded GUIDLNSN	.	No Answer, Missing Value, No
				1	Yes
171	RCSHTRNS	38	recoded CSHTRNSN	.	No Answer, Missing Value, No
				1	Yes
172	RPPTYCSH	39	recoded PPTYCSHN	.	No Answer, Missing Value, No
				1	Yes
173	RNUMCHKS	40	recoded NUMCHKSN	.	No Answer, Missing Value, No
				1	Yes
174	RRECONCL	41	recoded RECONCLN	.	No Answer, Missing Value, No
				1	Yes
175	RTWOSIGN	42	recoded TWOSIGN	.	No Answer, Missing Value, No
				1	Yes
176	RFIDEL	43	recoded FIDELN	.	No Answer, Missing Value, No
				1	Yes

Var#	Variable Name	Q #	Description		Values & Labels
177	RCHNGBNK	15	recoded CHNGBNKN	.	No Answer, Missing Value, No
				1	Yes
178	RCSHBDGT	44	recoded CSHBDGTN	.	No Answer, Missing Value, No
				1	Yes
179	RMINBAL	34	recoded MINBALN	.	No Answer, Missing Value, No
				1	Yes
180	RCOMPBAL	33	recoded COMPBALN	.	No Answer, Missing Value, No
				1	Yes
181	RSAVINGV	48	recoded SAVING	.	No Answer, Missing Value, No
				1	Yes
182	RNOW	48	recoded NOW	.	No Answer, Missing Value, No
				1	Yes
183	RCD	48	recoded CD	.	No Answer, Missing Value, No
				1	Yes
184	RNEGOTCD	48	recoded NEGOTCD	.	No Answer, Missing Value, No
				1	Yes
185	RREPO	48	recoded REPO	.	No Answer, Missing Value, No
				1	Yes
186	RTREASUR	48	recoded TREASUR	.	No Answer, Missing Value, No
				1	Yes
187	RAGNENCY	48	recoded AGNENCY	.	No Answer, Missing Value, No
				1	Yes
188	RCOMPAPR	48	recoded COMPAPR	.	No Answer, Missing Value, No
				1	Yes
189	RBNKACPT	48	recoded BNKACPT	.	No Answer, Missing Value, No
				1	Yes
190	RINVSTAC	48	recoded INVSTAC	.	No Answer, Missing Value, No
				1	Yes
191	CUMLATIV	NA	Cumlative score of cash management technique usage	calculated from variables 157 to 190.	
192	CUM_4GRP	NA	recoded CUMLATIV	.	0, Missing Value
				1	6 - 15
				2	16 - 19
				3	20 - 22
				4	23 - 30
193	CUM_3GRP	NA	recoded CUMLATIV	.	0, Missing Value
				1	6 - 17
				2	18 - 20
				3	21 - 30
194	RBUDGET	10	recoded BUDGET	.	No Answer, Missing Value
195	RASSETS	11	recoded ASSETS	.	No Answer, Missing Value
196	RLIABIL	11	recoded LIABIL	.	No Answer, Missing Value

Var#	Variable Name	Q #	Description	Values & Labels	
197	RFUNDBAL	11	recoded FUNDBAL	.	No Answer, Missing Value
198	RPOSAEDU	49	recoded POSAEDUC	.	No Answer, Missing Value, 0
				1	< BA / CPA
				2	BA / CPA
				3	> BA / CPA
199	RPOSBEDU	49	recoded POSBEDUC	.	No Answer, Missing Value, 0
				1	< BA / CPA
				2	BA / CPA
				3	> BA / CPA
200	CUMED	NA	Cumlative education level index	calculated from variables 198 and 199 (added together)	
201	RCUMED	NA	recoded CUMED into three groups	.	0, No Answer, Missing Value
				1	1 - 3
				2	4
				3	5 - 7
202	RPOSAFLD	49	recoded POSAFIEL	.	No Answer, Missing Value
				1	Financial (1, 2, 5)
				2	Theology (6)
				3	Business Administration (9)
				4	Liberal Arts (the rest)
203	RPOSBFLD	49	recoded POSBFIEL	.	No Answer, Missing Value
				1	Financial (1, 2, 5)
				2	Theology (6)
				3	Business Administration (9)
				4	Liberal Arts (the rest)
204	RFTEEMPL	6	recoded FTEEMPLY	.	No Answer, Missing Value
				1	< 10
				2	10 < 25
				3	≥ 25
205	RFTEFIN	12	recoded FTEFIN	.	No Answer, Missing Value
				1	≤ 3
				2	4 - 5
				3	≥ 6
206	RYRSWRKD	18	recoded YRSWORKD into three groups	.	No Answer, Missing Value
				1	< 4
				2	4 - 8
				3	≥ 9
207	RYRSWRK2	18	recoded YRSWORKD into two groups	.	No Answer, Missing Value
				1	< 9
				2	≥ 9
208	RYRSWRK3	18	recoded YRSWORKD into two groups	.	No Answer, Missing Value
				1	< 4
				2	≥ 4
209	CUM_2GRP	NA	recoded CUMLATIV into two groups	.	No Answer, Missing Value
				1	6 - 19
				2	20 - 30

Var#	Variable Name	Q #	Description		Values & Labels
210	RFTEEMP2	6	recoded FTEEMPLY into two groups	.	No Answer, Missing Value
				1	< 25
				2	≥ 25
211	RFTEFIN2	12	recoded FTEFIN into two groups	.	No Answer, Missing Value
				1	≤ 3
				2	≥ 4
212	RPOSAED2	48	recoded POSAEDUC	.	No Answer, Missing Value, 0
				1	< BA / CPA
				2	BA / CPA
				3	> BA / CPA
213	RPOSBED2	48	recoded POSBEDUC	.	No Answer, Missing Value, 0
				1	< BA / CPA
				2	BA / CPA
				3	> BA / CPA
214	RPOSCED2	48	recoded POSCEDUC	.	No Answer, Missing Value, 0
				1	< BA / CPA
				2	BA / CPA
				3	> BA / CPA
215	CUMED2	NA	cumlative eduction score of #212, #213 & #214		
216	RCUMED22	NA	recoded CUMED2 into two groups	.	No Answer, Missing Value, 0
				1	1 - 4
				2	5 - 8
217	RCUMED23	NA	recoded CUMED2 into three groups	.	No Answer, Missing Value, 0
				1	1 - 4
				2	5
				3	6 - 8
218	CUM_LOG	NA	transformed CUMED2 logistically		
219	CUM_EXP	NA	transformed CUMED2 exponentially		
220	RBUDSTD	10	standardized BUDGET: RBUDGET/RNUMLOCL		
221	RBUDSTD2	10	standardized BUDGET: RBUDGET/NUMLOCAL		
222	RNUMLOC2	3	recoded NUMLOCAL into two groups	.	No Answer, Missing Value
				1	1 - 199
				2	≥ 200
223	RPOOLCSH	35	recoded POOLCSHN	.	No Answer, Missing Value, No
				1	Yes
224	RMANAGER	36	recoded MANAGERN	.	No Answer, Missing Value, No
				1	Yes
225	RCSHPOS	45	recoded CSHPOSN	.	No Answer, Missing Value, No
				1	Yes

Var#	Variable Name	Q #	Description		Values & Labels
226	RINVTPOS	46	recoded INVTPOSN	.	No Answer, Missing Value, No
				1	Yes
227	RSCHEDUL	47	recoded SCHEDULN	.	No Answer, Missing Value, No
				1	Yes
228	TAGE_LOG	2	transformed AGE logistically		
229	TNUMLOCL	3	transformed NUMLOCAL exponentially		
230	TPOSAED	49	transformed POSAEDUC exponentially with a limit		
231	BASIC	NA	Score for Index Category 1		
232	INVST_SM	NA	Score for Index Category 2		
233	INTERNAL	NA	Score for Index Category 3		
234	EXTERNAL	NA	Score for Index Category 4		
235	CONTROLS	NA	Score for Index Category 5		
236	CASHBUDG	NA	Score for Index Category 6		
237	INVST_AD	NA	Score for Index Category 7		
238	INDEX	NA	Index Score		
239	INDX3GRP	NA	recoded Index Score into 3 groups	.	Missing Value
				1	.5 - 5
				2	5.01 - 6.25
				3	6.26 - 10
240	USAGE	NA	Number of Cash Management Techniques Used by Organization		
241	INDX_EXP	NA	transformed INDEX exponentially with a limit		
242	USAG_EXP	NA	transformed USAGE exponentially with a limit		
243	BDGT100K	10	recoded BUDGET, in $100,000		
244	USAG_LOG	NA	transformed USAGE logistically		
245	INDX_LOG	NA	transformed INDEX bogistially		
246	BGTK3GRP	10	recoded BDGT100K into 3 groups	.	Missing Value, No Answer
				1	1 - 25
				2	25.1 - 60
				3	60.1 - 190
247	USAG2GRP	NA	recoded USAGE into 2 groups	.	Missing Value, 0
				1	≤ 22
				2	≥ 23
248	INDX2GRP	NA	recoded INDEX into 2 groups	.	Missing Value, 0
				1	1 - 5.75
				2	> 5.75
249	RPOLICY	NA	recoded POLICY	.	Missing Value, No Answer, 0
				1	National Sets or Recommends
				2	Local Independent
250	INDX_STD	NA	standardized INDEX (divided INDEX by 10)		

Var#	Variable Name	Q #	Description	Values & Labels
251	USAG_STD	NA	Standardized USAGE (divided USAGE by 38)	

APPENDIX C
HUMAN SUBJECT WAIVER

The following pages are reproductions of the application and certification of exemption of projects involving human subjects from the Institutional Review Board of the Research Division at Virginia Polytechnic Institute and State University.

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Research Division
306 Burruss Hall
Blacksburg, Virginia 24061-0244
(703) 231-6077 FAX (703) 231-4384

MEMORANDUM

TO: Jeffrey R. Peirce
Urban Affairs and Planning

FROM: Ernest R. Stout
Associate Provost for Research

DATE: November 3, 1993

SUBJECT: IRB EXEMPTION/"Cash Management in Religiously Affiliated Non-profits"
Ref. 93-185

I have reviewed your request to the IRB for exemption for the above referenced project. I concur with Dr. Stephenson that the research fall within the exempt status.

Best wishes.

ERS/php

c: Dr. Stephenson

X552-0588 3
573-1825

CERTIFICATION OF EXEMPTION OF PROJECTS INVOLVING HUMAN SUBJECTS

Principal Investigator(s): Jeffrey Raymond Reimer

Department(s): Urban Affairs and Planning

Project Title: Cash Management in Religiously Affiliated Nonprofits

Source of Support: Departmental Research ______ Sponsored Research ______ Proposal No. ____________

1. The criteria for "exemption" from review by the IRB for a project involving the use of human subjects and with no risk to the subject is listed below. Please initial all applicable conditions and provide the substantiating statement of protocol.

[ ] a. The research will be conducted in established or commonly established educational settings, involving normal education practices. For example:

   1) Research on regular and special education instructional strategies;

   2) Research on effectiveness of instructional techniques, curricula or classroom management techniques.

[ ] b. The research involves use of education tests (__ cognitive, __ diagnostic, __ aptitude, __ achievement), and the subject cannot be identified directly or through identifiers with the information.

[X] c. The research involves survey or interview procedures, in which:

   [X] 1) Subjects cannot be identified directly or through identifiers with the information;

   [ ] 2) Subject's responses, if known, will not place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability;

   [X] 3) The research does not deal with sensitive aspects of subject's own behavior (illegal conduct, drug use, sexual behavior or alcohol use);

   [ ] 4) The research involves survey or interview procedures with elected or appointed public officials, or candidates for public office.

[ ] d. The research involves the observation of public behavior, in which:

   [ ] 1) The subjects cannot be identified directly or through identifiers;

   [ ] 2) The observations recorded about an individual could not put the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability;

   [ ] 3) The research does not deal with sensitive aspects of the subject's behavior (illegal conduct, drug use, sexual behavior or use of alcohol).

[ ] e. The research involves collection or study of existing data, documents, recording pathological specimens or diagnostic specimens, of which:

   [ ] 1) The sources are publicly available; or

   [ ] 2) The information is recorded such that the subject cannot be identified directly or indirectly through identifiers.

2. I further certify that the project will not be changed to increase the risk or exceed exempt condition(s) without filing an additional certification or application for use by the Human Subjects Review Board.

Note: If children are in any way at risk while this project is underway, the chairman of IRB should be notified immediately in order to take corrective action.

Jeffrey R... 11/3/93
Principal Investigator(s) Date

Principal Investigator(s) Date

... 11/3/93
Departmental Reviewer Date

... 11/3/93
Chmn. Institutional Review Board Date

APPENDIX D

MAILINGS ASSOCIATED WITH SURVEY

The following pages are reproductions of the letters and postcards that were mailed to potential respondents in connection with this research. The survey itself can be found in Appendix A: *Survey*.

<<DEPARTMENT LETTERHEAD>>

November 1, 1993

title~ fname~ lname~
position~
conf.~
street~
citystate~ zip~

Dear title~ lname~;

The attached questionnaire is sent to you as part of a student's (Jeffrey Peirce) effort to complete the thesis requirement for the degree of Master of Urban Affairs here at Virginia Polytechnic Institute and State University. This effort is undertaken strictly for academic reasons and I earnestly solicit your cooperation in assisting in its timely completion. Thank you for your cooperation with this effort.

Sincerely,

Max O. Stephenson, Jr.
Associate Professor

/kdw

Enclosure

The following is a replication of the postcard that was sent to potential respondents one week prior to the mailing of the survey.

October 26, 1993

Dear title~ lname~,

In one week you will receive a survey concerning cash management. This survey is part of my thesis project for a masters degree in public affairs & policy at Virginia Polytechnic Institute & State University. I would appreciate your help in filling out the survey when it arrives.

Thank you.

Jeffrey R. Peirce

The following is a replication of the postcards sent to Roman Catholic and United Methodist non-respondents approximately three weeks after mailing the survey.

November 24, 1993

Dear title~ lname~,

A few weeks ago you received my thesis-related survey about cash management. As of the above date, I have not received your response. If it has crossed in the mail, thank you. If you have not yet responded, I ask again that you do so. To date only 37% of the surveys mailed have been returned. I would appreciate your help in increasing the response rate to at least 50%. Please call 703/552-0588 if you need another copy.

Thank you.

Jeffrey R. Peirce

The following is a replication of the postcards sent to United Church of Christ non-respondents approximately three weeks after mailing the survey.

November 24, 1993

Dear title~ lname~,

A few weeks ago you received my thesis-related survey about cash management. As of the above date, I have not received your response. If it has crossed in the mail, thank you. If you have not yet responded, I ask again that you do so. To date, only 18% of the UCC conferences have responded, while between 40 - 50% of the Methodist Conferences and Catholic Diocese have done so. I need your assistance in ensuring that my own denomination (UCC) is as represented as those of my advisors! Please call 703/552-0588 if you need another copy.

Thank you for your help.

Jeffrey R. Peirce

APPENDIX E

STATISTICALLY INSIGNIFICANT FINDINGS

Tables in this Appendix illustrate survey results that were not statistically significant.

Table 14: Membership Size Relationships

Dependent Variable	Independent Variable: Number of Local Congregations Represented (One-Tailed T-Test)			
	Catholic	UCC	Methodist	Combined
Overall Usage	.39	1.2	2.32*	.65
Sophistication Index	-.06	.75	2.22*	.62

* p = 0.025

Table 15: Membership Size by Denomination

Number of Member Congregations	Percent of Responding Organizations by Mebership Size (Column Percent)			
	Catholic	UCC	Methodist	Combined
1-75	32	11	2	16
76-125	42	17	2	21
126-250	24	39	7	20
251-500	2	33	43	24
501+	0	0	46	19
Total	100	100	100	100
Mean (Std Dev)	102 (52)	211 (122)	546 (314)	304 (294)

VITA

Jeffrey R. Peirce

Born:	June 11, 1967, Providence, RI.
Education:	Master of Urban Affairs, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1994.
	Bachelor of Arts, Grinnell College, Grinnell, IA, 1989. Major in Sociology.
Paid Work Experience:	Graduate Research Assistant, Department of Urban Affairs and Planning, Virginia Polytechnic Institute and State University, Blacksburg, VA. August, 1992 - May, 1994.
	Administrative Assistant, Prince George's County Executive's Office, Prince George's County, MD. May - August, 1993.
	Assistant to the Building & Planning Director, City of Grinnell, Grinnell, IA. June, 1989 - July, 1992.
	Admission Officer, Grinnell College, Grinnell, IA. Saturdays, October, 1989 - March, 1991.
	Residence Hall Host, Office of Admission, Grinnell College, Grinnell, IA. August, 1987 - May, 1989.
	Drafter, A.A. Nunes, Inc, Bristol, RI. Summers, 1986 - 1988.
	Tour Guide, Office of Admission, Grinnell College, Grinnell, IA August, 1986 - May, 1989.
	Office Assistant, Bursar's Office, Brown University, Providence, RI. Winter Breaks (December - January), 1985/86 - 1988/89.
	Cashier, Food Service of Grinnell, Grinnell College, Grinnell, IA. October, 1985 - May, 1989.

Vita - Jeffrey R. Peirce (continued).

Volunteer Experience:

Co-Chair, Graduate Urban Affairs & Planning Association, Department of Urban Affairs & Planning, Virginia Polytechnic Institute & State University, Blacksburg, VA. August, 1993 - January, 1994.

Board Member, Poweshiek County Habitat for Humanity, Grinnell, IA. May, 1991 - June, 1992.

Committee Member, Grinnell 2000 Energy Task Force, Grinnell 2000 Foundation, Grinnell, IA. May, 1991 - June, 1992.

Member, Iowa Association of Building Officials. 1992.

Committee Member, Student Social Center Building Committee, Office of the President, Grinnell College, Grinnell, IA. January, 1987 - May, 1989.

Board Member, Bristol Theatre Company, Bristol, RI. July, 1988 - June, 1989.

Committee Member, Housing Committee, Office of Student Affairs, Grinnell College, Grinnell, IA. August, 1987 - May, 1989.

Intern, Des Moines Planning & Zoning Commission, Des Moines, IA. August, 1987 - December, 1987.

Annual Fund Phonathon Caller, Office of Development, Grinnell College, Grinnell, IA. Fall, 1985 -1986.

Awards:

Outstanding Achievement Award, Virginia Citizens Planning Association. April, 1994.

Student Scholarship Award for Academic Excellence and Professional Promise, Virginia Citizens Planning Association. April, 1993.

1991 Smoothness Award in Recognition of Quality Workmanship - Municipal Street Paving, Asphalt Paving Association of Iowa. March, 1992.

Outstanding Young Man of America. 1988.