

## **GETTING ALL YOU CAN: COUNTY GOVERNMENT INVESTMENT POOL PARTICIPATION BASED ON NEED OR WANT**

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### **ABSTRACT**

This study examines county government participation in the state-sponsored investment pool, the North Carolina Capital Management Trust (NCCMT) term portfolio, as a method to increase investment earnings for various expenditures under poor market conditions. Based on a survival analysis model of all counties that participated inclusive of additional survey data from finance officers concerning annual practices between fiscal years 2008-2012, findings suggest that county sales taxes were the most influential revenue stream on NCCMT term portfolio participation in conjunction with the presence of available funds in the cash portfolio. Findings also determined that the NCCMT term portfolio was the safest investment option available for this time period compared to other securities.

### **INTRODUCTION**

Long-term security opportunities are usually not a standard addition to local government investment policies. For the most part, lucrative investment opportunities for local governments decreased dramatically from 2008 to 2011 due to diminishing revenue streams as well as poor market performance. Even with available monies for investment purposes, most securities produced very low yields, usually 1% or less. In these cases, funds traditionally used for investments are utilized for additional social services, the sustaining of normal operations, and payment of debt service obligations. More innovation among cash management practices becomes necessary to eliminate the numerous payables. For local governments with cash reserves, the state-sponsored local government investment pool is usually one of the safer options for local governments that need additional deposit and withdrawal flexibility. Under the basic premise of investment

pool policy, local governments can utilize the pools to maximize investments in the short-term to cover costs which occur later in the fiscal year or withdraw funds in favor of more lucrative securities. However, there are also instances in which the pool can also provide the best viable option for more expensive capital projects.

Previous literature concerning local government investment pools primarily focus on stability problems among particular pools, usually as a result of investment practices that relied on favorable market conditions. Absent from the literature are studies in which there are sound investment pools but questions concerning the choice of investment pools compared to other securities nor are there any studies that examine the choice of the local government investment pool as a long-term financing tool for regular as well as unforeseen costs in addition to more lucrative projects.

This exploratory study examines county participation North Carolina's state-sponsored local government investment pool--the North Carolina Capital Management Trust (NCCMT) term portfolio, as a long-term investment tool for higher yield opportunity as well as a funding source for various expenditures. While most research has focused on problematic investment pool operations, this study examines why counties are contributing as well as removing funds from the term portfolio based on available revenue streams that fluctuate and the decision making rationales of finance officers. The results suggest a significant relationship between an increase in the amount of sales tax revenue available and contributions to the NCCMT. Additional significant relationships were found between initial county participation in the cash portfolio and term portfolio participation as well as the perceived stability associated with the fund.

This research provides many contributions to public finance literature based on the investment activities of local governments. It is one of the few studies which specifically examined activities surrounding a specific state-sponsored local government investment pool (Bunch, 1999; Modlin & Stewart, 2013). It is the first study which examines interaction with a primary portfolio within an investment pool along with the factors that facilitate participation. The research further

advances the literature by verifying the cautionary nature associated with investing securities (McCue, 2000). North Carolina finance officers were fairly confident concerning the security of investments within the local government investment pool term portfolio, furthermore responses have indicated that a safe security has elevated importance compared to an increased investment opportunity. This point is further verified with respondents stating that only a minimal basis point increase was needed for participation. The timing of the study has importance as well due to the years that were examined and the impact on local economies during 2008-2012.

This paper is organized as follows: the next section provides a discussion of local government investment practices with a more directed discussion on investment pool activity and the NCCMT term portfolio. The following two sections present the data and methods inclusive of descriptive statistics and a model discussion and development. The final two sections present the statistical results based on two survival models with a discussion of the findings and the conclusion.

### **LOCAL GOVERNMENTS AND INVESTMENT PRACTICES**

Local government cash management policies have proven to be influential mechanisms in preventing substantial losses among public funds. Sound cash management policies usually have six primary objectives: proper management of liquidity, continual efforts at accelerating collections, maximizing investment earnings, enabling policies that reduce the need to borrow, maintaining high levels of efficiency in the management of disbursements, and providing timely and accurate reporting (Larson, 2004). Most cash management policies provide information as to the amount of cash needed in order to provide services on a regular basis (Bland, 1986). In many comprehensive annual financial reports (CAFRs), the cash management policy also provides directives for investment options. Depending on the local government structure, cash management responsibilities vary across jurisdictions. In many states, cash management, more specifically investment decisions,

is the responsibility of an elected official; whereas, the finance officer has this responsibility among professionally administered county governments.

Local governments under state laws and legislation providing authority to state oversight organizations are limited as to the type of investments that are most suitable (Coe, 1988; Miller, 1982). Depending on cash flow needs as well as the fiscal capability of a local unit, finance officers usually have numerous investment opportunities despite policy limitations. There have been findings that suggest that although availability exists for higher yielding securities, public investors choose the more conservative investment options (McCue, 2000). For that reason, the more popular securities have been the local government investment pool, certificates of deposits (CD), and treasury securities (T-bills, notes, and bonds), which are highly liquid securities with principal and interest fully guaranteed by the U.S. government (Onwujuba and Lynch, 2002; Modlin & Stewart, 2012).

#### ***Local Government Investment Practices***

There have been very few studies which have examined investment activities among local governments. In the late 1980s, Charles Coe examined the investment practices among North Carolina local governments to determine their compliance with benchmarks issued by the North Carolina Local Government Commission (LGC). The findings suggested that local government staff followed the guidelines set by the LGC and were conservative with investment practices, avoiding higher-yielding investment instruments due to a lack of expertise. Among county governments within the study, more than 70% invested in the state investment pool---more than any other security. Larger counties invested in the pool at a much higher rate compared to smaller counties. Certificates of Deposits (CDs), negotiable order of withdrawals (NOWs), and money market instruments were popular among smaller counties (Coe, 1988).

Approximately a decade later, Onwujuba and Lynch (2002) examined the cash management practices in Louisiana cities with populations that exceeded 1,000. The study was

divided into three cash management policy areas: collection & disbursement, investment practices, and banking relationships. Most Louisiana cities were fairly conservative with their investment practices. Onwujuba and Lynch (2002) found that most cities preferred to invest the highest percentage of cash in CDs and NOWs, followed by U.S. Agency securities. There was also a difference within options as it relates to city size. Medium and smaller cities preferred the CD, NOW, and the MMDA; whereas, larger municipalities had more diverse portfolios.

In 2012, (author) conducted a cash management study of county governments that comprised of North Carolina, South Carolina, and Tennessee. Much like the previous studies, finance officers, county trustees, and county treasurers were fairly conservative with investment choices. Most of the county governments overwhelmingly chose the local government investment pool as the primary choice for investments followed by CDs and money market funds. However, unlike the previous studies, only larger governments seemed to have interest in government and treasury securities. This study also examined the percentage of idle funds that were placed in securities. Interestingly enough, nearly half of the counties had at least 20% of idle funds invested within a local government investment pool.

The most recent study evaluated county government participation in the North Carolina Capital Management Trust (NCCMT) cash portfolio during the recession years of 2008-2011 (Modlin & Stewart, 2013). Findings indicated that the cash portfolio was indeed the safest option for county governments in North Carolina as determined by finance officers, especially during the recession. There was also a significant relationship between additional investments into the trust and participation with most of these funds originating from state remitted sales taxes. Findings also suggest these monies were used for standard operating expenditures. Although socioeconomic variables were not significant in determining cash portfolio activity, the isolation of recession years suggested less participation in the trust.

### LOCAL GOVERNMENT INVESTMENT POOLS

One of the most popular and safest options for cash holdings among many government units is the local government investment pool. Not only does it provide safety for idle cash, but the withdrawal flexibility is an additional feature (Coe, 2007; Modlin & Stewart, 2013). Local government investment pools can either be state-sponsored, a mixed effort of state and private entities, or exclusively administered privately. There are also situations in which there are independent collaborations among units to engage in investment activities.

Local government investment pools can usually earn approximately 15-25 percent more on investments compared to individual unit practices depending on market conditions (Thompson, 1988). Reasons for this advantage include the likelihood of higher yields from high-denomination securities due to the availability of large amounts of money. Second, the managers and investors are full time and have the ability to actively scour the market; and third, the amount of diversification that is available within portfolios (Thompson and Gates, 1988). For smaller governments, investment pools have become a primary investment opportunity for idle funds that help sustain a positive cash flow throughout the fiscal year (Modlin & Stewart, 2013)

State efforts at protecting pooled monies have been an evolving process due to highly questionable investment practices during the 1990s. State-mandated limitations have not prevented public sector managers from exploring options that maximize yields on short-term securities similar to that of an equivalent private sector counterpart (Mattson, Hackbart, and Ramsey, 1999). Investment practices among investment pools in California and Texas provided the prompt for increased legislative changes and oversight. In December 1994, the Orange County California Investment Pool (OCIP) lost an estimated \$1.7 billion due to the leveraging of a major portion of the portfolio through the utilization of multiple layers of reverse repurchase agreements (Lynch, Hannarong, and Onwujuba, 2002). The proceeds were invested in fixed-income derivatives whose value depends on underlying fixed-income securities.

Thus, lower interest rates generally create a much higher value for derivatives, but as interest rates rose throughout the mid-1990s, Orange County, which had up to 40 percent of its portfolio in derivatives and other high risk instruments, suffered substantial losses within its portfolio (Sjoberh and Evashenk, 1996). Subsequently, the pool could not produce enough cash to meet the repurchase agreement obligations and realized losses began to occur (Californian Debt and Investment Advisory Commission, 2000). TexPool had a very similar situation. Financiers also leveraged the Texpool portfolio with repurchase agreements and chose to invest available funds in fixed-income derivatives that suffered as interest rates rose in the early 1990s. TexPool purchased \$5 billion worth of investments and leveraged \$1.3 billion with other securities (Blumental, 1994). Initially, TexPool lost \$75 million or 2 percent of its portfolio, but all together it was estimated that the losses were approximately \$2.2 billion or 59 percent of the investment pool's balance as a result of the 'run' by local governments. Much of the run was attributed to a *Wall Street Journal* article that chronicled management similarities between TexPool and the Orange County Investment Pool (Bunch, 1999).

#### **THE NORTH CAROLINA CAPITAL MANAGEMENT TRUST**

Under North Carolina law, finance officers are responsible for investments that take place on behalf of the corresponding unit (N.C.G.S. 159-30). It is not unusual for county commissioners to adopt investment policy guidelines in addition to general statute requirements. In most cases, there are numerous security options for the finance officer, but the primary objectives are safety, liquidity and yield, among investment decisions (North Carolina Capital Management Trust, 2011(a)). It is also important to have a full understanding of the market conditions surrounding security options with the finance officer accepting full responsibility of all investment practices despite the presence of an investment manager (Allison, 2007). Therefore, once bank minimum requirements

are fulfilled, the remainder of these funds is available for investment purposes as well as additional unexpected expenses.

The North Carolina Capital Management Trust (NCCMT) began in 1982 and is certified and regulated under the direction of the North Carolina State Treasurer. The trust has both a cash and term portfolio. The cash portfolio, which began in 1982, is a money-market portfolio designed for short-term operational use for local governments within the state including single-purpose districts, public hospitals, and school boards. Local governments can invest and withdraw funds as needed during the fiscal year with no cost. In the case of withdrawals, only one day of notice is required unless there is a large amount, in which additional notice is requested (Allison, 2007). The term portfolio was included in 1987 and is a short-term bond fund with a floating net asset value and has traditionally been utilized for large sums of monies that will at some point be used for specific capital project expenditures; however, diminishing market conditions and budget constraints have lessened those opportunities.

There are two primary differences between the portfolios. First, there are differences among investment objectives. The cash portfolio tries to maintain a net asset value of \$1.00 per share while obtaining the highest level of income possible while simultaneously maintaining capital and liquidity; whereas, the main objective of the term portfolio is to obtain a high level of income with the preservation of capital and a floating net asset value. Second, both portfolios invest in U.S. government and North Carolina obligations as well as bonds and notes of any North Carolina public authority, but the term portfolio also has the option of high grade money market instruments and other securities as permitted by N.C.G.S. 159-30 and 20 North Carolina Administrative Code 3.0703.

The safety of liquidity surrounding the NCCMT is rather extensive. First, the net asset value per share remains fixed at \$1 which was sustained within the cash portfolio even through the recent recession years of 2008-2011 (Modlin & Stewart, 2013). Second, the fund is registered with the Securities & Exchange Commission (SEC) and is a SEC-registered (2a-7) money market mutual fund which requires additional reporting information to



ensure added investment safety. For example, the fund provides Weighted Average Maturity (WAM) information to measure sensitivity to market and interest rate changes as well as Weighted Average Life (WAL) of securities within a fund that measures sensitivity in liquidity and credit risk (North Carolina Capital Management Trust, 2011(a)). Third, the NCCMT has a AAAM rating from Standard & Poor's, the highest rating available for money market funds, thus illustrating the capability of the fund to withstand credit risk exposure while maintaining an elevated capacity to maintain principle and limit losses (Standard & Poor's, 2014a). The fund is only one of more than ninety rated by Standard & Poor's for 2014 and is managed by a private firm although under state oversight. Net assets within the term portfolio, which is the basis of this study, was \$60.40M as of June 30, 2011 (North Carolina Management & Trust, 2011(a)).

This study attempts to examine participation in the state-administered investment pool term portfolio based on numerous revenue streams, other investment opportunities and the need to achieve more revenue for either operating needs or capital projects. County governments, which account for a substantial portion of portfolio assets, indeed influence the investment decisions of pool managers. Subsequently, this study is attempting to build on previous literature by examining finance officer investment decisions to invest in a long-term sustainable management security and for what type of nontraditional purposes.

## DATA AND METHODS

Several variables were constructed in order to determine why county governments chose to participate or remove funding from the term portfolio. Three of the variables constructed were revenue streams that encompass the vast majority of county government cash reserves. In this study, property tax (PROP), sales tax (SALES), as well as service (SERVICE) revenues were all examined to assess term portfolio participation. The primary revenue streams of PROP and SALES were also used in the previous local government investment pool study and, along

with a third less significant revenue stream, did prove to have some significance in investment pool participation (Modlin & Stewart, 2013).

The remaining variables for use in the analysis were obtained from survey data that was sent to all North Carolina county government finance officers that represented counties that participated in the term portfolio at any time between fiscal years 2008-2012. Responses were received from approximately 53% of counties inclusive of all budget classifications. From the information received, several other variables were constructed including the number of basis points (BASIS) needed to remain in the term portfolio along with the presence of an investment policy (INVPOL) which is very common in southeastern county governments (Modlin & Stewart, 2012).

Finance officers were also asked questions concerning origins of funds for investment, how the term portfolio compared to other investment opportunities, and frequency of participation. As expected, safety was a major reason (REATERM) for investing. However, the origin of the funds (REVTERM) and the ability to move funds from other areas (MOVETERM) did provide alternative findings.

The final variable was constructed following a noticeable increase in portfolio participation in 2012. In order to try to capture the rationale behind this increase, a variable was created for the fiscal year 2012 (YEAR 12). In October 2011, a meeting notice was announced in reference to a change in the fund's fundamental concentration policy in which the fund could now invest more than 25% of its total assets in the financial services industry allowing more flexibility to invest in more securities under state law and provide the fund more flexibility to modify investments in different sectors and adjust for changing market conditions. The policy would go into effect approximately thirty days after shareholder approval (North Carolina Capital Management & Trust, 2011(b)). By the end of that calendar year, four additional counties invested compared to the beginning of the fiscal year with a \$29M increase in funds. Table 1 provides a list of variables used in the analysis.

**Table 1**  
***Definitions of Variables and Data Sources***

Variable	Definition and Data Source
TERM (Dependent)	Participation in the NCCMT term portfolio in years 2008-2012; <i>Source:</i> North Carolina Department of State Treasurer Local Government Commission
PROP	Total county property tax revenue as a percent of total county revenue; <i>Source:</i> North Carolina Department of State Treasurer Local Government Commission Annual Financial Report Data
SALES	Total county sales tax revenue as a percent of total county revenue; <i>Source:</i> North Carolina Department of State Treasurer Local Government Commission Annual Financial Report Data
SERVICE	Total designated revenue from (parking revenues, rent and royalties, recreational, third party payments from social services, mental, and public health as well as enterprise fund fees) as a percent of total county revenue; <i>Source:</i> North Carolina Department of State Treasurer Local Government Commission Annual Financial Report Data
INVPOL	Dummy variables coded 1 if a county has a cash investment policy and 0 otherwise; <i>Source:</i> Survey data
REATERM	Dummy variable coded 1 if primary reason for investing in local government investment pool was to safeguard public funds and 0 otherwise; <i>Source:</i> Survey data
MOVETERM	Dummy variable coded 1 if funds were previously located in the cash portfolio and 0 otherwise; <i>Source:</i> Survey data
REVTERM	Dummy variable coded 1 if the original source of funds was from property tax revenues and 0 otherwise; <i>Source:</i> Survey data
BASIS	Dummy variable coded 1 for 100 or more basis points needed by the portfolio for continued investment and 0 otherwise; <i>Source:</i> Survey data
YEAR 12	Dummy variable coded 1 for county participation in fiscal year 12 after NCCMT policy change during year 2011 which affected the percentage of investment in any one industry and 0 otherwise; <i>Source:</i> North Carolina Department of State Treasurer Local Government Commission

To determine what variables contribute to term portfolio participation, a survival analysis model was created based on the covariates listed in Table 1. Survival analysis is used because the goal of the study is to examine a particular event, or qualitative change, among an individual or organization at some particular

time. The data for the event is the actual time in years when county governments opted to participate in the term portfolio. For this particular cross-sectional time series, there is one observation for each county per year with any county 'at risk' to participate. Although primarily used in the biological sciences, this method has been used previously to determine policy innovations among state governments (Berry and Berry, 1990). Two models will be used with one inclusive of the dummy variable for Year 12. Each model is expected to provide some explanation either due to revenue stream changes or decision making by the finance officer.

$$h(t) = h_0(t) \exp\{\beta_1 INVPOL + \beta_2 REATERM + \beta_3 MOVETERM + \beta_4 REVTERM + \beta_5 BASIS + g(t) (\gamma PROP_1 + \gamma SALES_2 + \gamma SERVICE_3)\}$$

In the above model,  $h(t)$  represents the hazard rate at time  $t$  or when a county is likely to participate within the fund; whereas,  $h_0(t)$  represents the baseline hazard, which has no direct estimate. Three time varying covariates (PROP, SALES, SERVICE) are also introduced and represented by  $Z_1, \dots, Z_3$  in the standard model. Estimation takes place through a coefficient  $\gamma_i$  for the covariate,  $g(t)Z_i$ , which is a function of the time period in question.

## FINDINGS

County government contributions to the term portfolio portion of the trust had exceeded \$548 million by the end of 2012.<sup>1</sup> Table 2 presents the fluctuations in participation over the five fiscal years of this study which includes the recession. Overall, there were about 13 counties that accounted for portfolio participation from 2007-2008 until 2012 when participation by additional counties increased substantially. Just prior to that, only 11 counties were participating in the term

<sup>1</sup> This information was available per specific request from the North Carolina Department of State Treasurer Local Government Commission.

portfolio by the end of the 2011 fiscal year. Even with this decrease, counties had approximately \$3 million more in the term portfolio than in 2007-2008. Investments began to recover by the end of 2011 and peaking by the end of fiscal year 2012. This finding was consistent with a previous study which examined NCCMT cash portfolio participation (Modlin & Stewart, 2013). As expected, counties with larger budgets strongly correlated with higher investment totals. However, Yadkin County, with a total budget size of just under \$50 million was one of the largest frequent investors from 2008-2010. Only counties with budget sizes that exceeded \$100 million invested \$40 million or more at any one time, with Buncombe County investing more than \$46 million during the 2011-2012 fiscal year.

**TABLE 2**  
***Summary Statistics of County Participation within NCCMT***  
***Term Portfolio (\$)***

Period	N	Median	Mean	Minimum	Maximum
2007-2008	14	1,292,987	2,116,716	7,351	8,735,268
2008-2009	14	2,000,000	2,710,326	91,668	9,044,348
2009-2010	12	1,979,983	2,598,819	92,163	10,163,299
2010-2011	11	2,000,000	2,924,982	92,379	10,255,289
2011-2012	36	3,002,564	7,350,626	250,104	46,039,527

Table 3 illustrates a breakdown of county government involvement by average contribution and budget size. For example, county budgets with less than \$25 million had an average contribution of \$270,271 in 2008 with only two participants increasing to an average size of more than \$1.3 million in 2012 with three participants. With almost any financial benchmark, it is important for units to examine the activities of comparable units and those benchmarks prior to implementation (Hughes and Laverdiere, 1986; Modlin, 2010; Modlin & Stewart, 2014). It is obvious the term portfolio became substantially more attractive for investors by 2012 with sizeable

contributions from nearly every class of governments. The only group that had an average decrease in participation was counties with budget sizes of \$75-100 million, but this can be attributed to more county involvement by 2012 with three participants compared to previous fiscal years with only 1-2 counties participating.

**TABLE 3**  
*Average County Portfolio Contribution by Budget Size*

Total (n=38)	2008	2009	2010	2011	2012
Budget Size (\$)					
>25M (n=3)	270,271(2)	1,065,001(2)	1,079,674(2)	1,571,768(2)	1,347,313(3)
25-50M (n=10)	3,254,880(3)	3,354,760 (3)	3,738,363(3)	5,173,834(2)	4,344,262(9)
50M- 75M (n=9)	809,750(3)	1,356,481(4)	1,014,011(3)	1,016,385(3)	4,512,056(8)
75M- 100M (n=3)	1,621,217(2)	3,070,718(1)	3,087,304(1)	3,909,692(1)	2,367,934(3)
More than 100M (n=13)	3,414,291(4)	4,304,408(4)	3,900,683(3)	3,908,253(3)	13,713,998(13)

The descriptive statistics for variables which will be used in the regression analyses are listed in Table 4. As expected, county governments in North Carolina rely heavily on property tax revenues for operational as well as capital expenditures with most receiving nearly 50% of total revenues from this source. Moreover, finance officers in the study maintained that property tax revenues were the origins of the revenue invested in the term portfolio as can be seen with the variable REVTERM. When moving money from one security to the portfolio, most finance officers kept the funds within the portfolio and just removed them from the cash portfolio in order to gain any extra interest available. As with the cash portfolio, the primary reason for investing within the trust was capital

safety REATERM and considering the time frame of the study, very little interest was needed to maintain funds within the trust BASIS; however, there were a few counties which required in excess of 300 points to maintain a presence. Very few of the respondents withdrew due to better external investment opportunities which were generally a 1% or less improvement.

**TABLE 4**  
*Descriptive Statistics: Overall Sample*

<i>Variable</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Range</i>
<b>PROP</b>	43.02	7.48	24.30-63.93
<b>SALES</b>	11.84	3.38	4.01-22.42
<b>SERVICE</b>	11.17	5.84	2.30-44.10
	<i>Mode</i>		<i>Range</i>
<b>INVPOL</b>	1		0-1
<b>REATERM</b>	1		0-1
<b>MOVETERM</b>	1		0-1
<b>REVTERM</b>	1		0-1
<b>BASIS</b>	0		0-1
<b>YEAR 12</b>	1		0-1

To test for the effects of the covariates on the decision to remain in the term portfolio, a Cox regression survival analysis was performed (Table 5). Two models were created with one inclusive of the Year 12 dummy variable. There were 38 different instances over the five year period in which counties participated in the term portfolio with 40 different counties having some level of participation. Upon examination of model 1, an increase in sales tax revenue led to an increased probability of remaining in the trust in both models despite the origins of revenues stemming from property taxes. This finding could be related to the significance surrounding the MOVTERM variable. Based on previous research, most of these funds come from sales taxes and this availability along with a potential basis point increase associated with the trust, creates an opportunity for finance officers to gain additional income. In both models, finance officers were nearly three times as likely to remain in the trust if there were available cash portfolio monies that could be

transferred. The other compelling finding is the safety aspect of the term portfolio. Finance officers were more than four times more likely to remain in the trust if there were concerns about liquidity safety over the time period.

**TABLE 5**  
***Regression Results***

<b>Variable</b>	<b>Survival Model 1</b>	<b>Survival Model 2</b>
Dependent Variable: TERM		Number of Observations: 97
PROP	-.0468(.9542)	-.0501(.9511)*
SALES	.1543(1.1669)**	.1429(1.1536)**
SERVICE	.0377(1.0384)	.0577(1.0593)*
INVPOL	.2503(1.2844)	.1843(1.2024)
REATERM	1.5070(4.5130)**	1.6988(5.4672)**
MOVETERM	1.0558(2.8742)**	1.3178(3.7352)**
REVTTERM	.0296(1.0300)	-.0452(.9558)
BASIS	-.1637(.8490)	.0101(1.0102)
Year12		-1.2044(.2999)**
N	97	97
Log Lik.	-120.2774	-117.7794
LR Chi-squared (8,9)	18.12**	23.12*

Notes: The dependent variable is continual county government investment in the term portfolio. The survival model refers to a Cox proportional hazards model. Hazard ratios are in parentheses; \*\*\*  $p \leq .001$ , \*\*  $p \leq .05$ ; \*  $p \leq .10$  (two-tailed test).

The second model in Table 5 included the year dummy for the change in NCCMT investment policy. The year dummy was significant which is not surprising given the influx of participants following the announcement concerning investment changes. The other noticeable difference in model 2 was the significance of all of the revenue variables with a reduction in PROP leading to counties remaining in the trust. Extra funds from enterprise activities SERVICE also proved to be instrumental in remaining in the trust controlling for the investment policy change. Although the odds of remaining were marginal (.02 compared to the initial model), it demonstrates counties were examining extra revenue sources available for investment, especially if there was a drop in property tax revenue. Both models had some reliability concerning the effect



of the covariates on term portfolio participation with significance levels at the .05 level.

### IMPLICATIONS

Findings from this study have many potential policy implications that encompass politics and administration. First, finance officers in North Carolina are responsible for budget formulation, implementation, cash management as well as investment activities. The comprehensive manner of this job description enables finance officers to monitor all cash transaction activities and invest and withdraw from the fund according to need. In states with an elected treasurer or trustee, it is substantially more difficult to execute cash mobilization in an expeditious manner. The political nature of the job is accompanied by various investment goals and benchmarks.

The local government investment landscape can also experience many changes if local government investment pools continue to evolve into a convenient holding account for idle cash even with a modest basis point increase. Traditional investment choices such as treasury notes and certificates of deposit could experience even lower returns due to decreased demand. As seen within this study, increased pool flexibility can be a catalyst for increased participants.

Fund balance requirements are also influenced by the findings. All cash and investments are usually part of fund balance requirements. It is important for local governments to have a security in which cash can be readily available, especially if there is a fund balance requirement. Furthermore, if a portion of this fund balance is 'assigned' for specific purposes, it is important for any security to have the capacity to meet these requirements.

Finally, the actions of elected officials cannot be understated. If there is no fund balance requirement, officials have the ability to pass budget ordinances that appropriate monies for various services leaving little or no available cash for investment. In states with organized unions, this has become a major problem since salaries encompass so much of the service cost. Additionally, unfunded liabilities associated with

personnel retirements have created a tow-fold problem: finding the most lucrative security possible while simultaneously creating cash flow to pay down the liabilities.

### SUMMARY AND CONCLUSIONS

It can be concluded that the safety of public funds, which were primarily property tax dollars, was the primary reason for remaining in the term portfolio. The chances of remaining in the fund also increased if there were an increased amount of sales tax monies. This same revenue stream, which is remitted by the state, is initially placed in the cash portfolio; however, finance officers were more likely to stay in the pool if there was an increased opportunity to increase portfolio performance by moving some of these funds into the term portfolio. These same variables, inclusive of the additional revenue streams, had substantially elevated significance when fund managers made the investment policy change in policy in 2011. By this point, there were an additional 25 counties participating.

The findings also verify and contradict previous studies. The safety aspects of the term portfolio and the relevance of sales taxes to participation substantiate previous findings (Modlin & Stewart, 2013). However, reasons for investing or even withdrawing are somewhat different from previous publications. Although only a few of the counties have withdrew funds over the past few years, reasons cited included better investment opportunities elsewhere or to meet general operating requirements. Only a couple of respondents stated withdrawing funds for debt service payments or even partial payment of capital projects. It was previously believed that one of the primary purposes of the trust was to finance larger, more expensive projects (Allison, 2007). One county even stated withdrawing from the fund to pay for costs associated with the water system. In North Carolina, this has been one of the most frequently cited fiscal problems for counties during the audit phase (Modlin & Stewart, 2014). This problem is especially important since Governmental Accounting Standards Board

(GASB) standards require charges for these types of enterprise funds to offset costs.

Although only North Carolina local governments can participate in the NCCMT, there are findings that can be generalized across jurisdictions. First, the safety feature of the investment pool has proven to be a viable option for many local governments with low revenue expectations. The presence of multiple AAAM rated pools among many states forces some pool managers to explore more conservative options for these units. It also provides a safer option compared to primary banks which may utilize zero balance accounts (ZBA) that may invest in less conservative money market securities. Second, this study also identifies particular revenue streams that are more popular for investment purposes. In this study, it was sales tax remittance monies, which are usually not the primary revenue stream for government services. Identifying less dependent revenue streams, especially if the state can invest the funds on behalf of the unit, can be a tremendous advantage for local governments for both the ability to obtain as much interest as possible as well as eliminating or lowering ACH and wire transfer costs.

Overall, the NCCMT term portfolio has evolved as a tangible security option for North Carolina counties. There were ten counties that remained in the trust for the entire duration of the study, but several others entered in 2012 and are there presently. The safety feature associated with initial investment along with the increased opportunity for additional earnings have proven positive for all parties. From a managerial standpoint, it has been suggested that many county/city managers do not have intimate knowledge of many governmental finance activities further complicating the decision making process concerning financial operations (Modlin, 2011; Modlin, 2014). Although delegation of responsibilities to finance officers is expected, more specific information at critical times can perhaps negate fiscal disparities. If counties have the personnel with the time, knowledge, and resources to invest appropriately, counties can actually increase future capacity and service provision.

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