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AUDIT AND COMPILATION REPORT TIMELINESS IN LOCAL GOVERNMENTS: AN  
EMPIRICAL INVESTIGATION OF MISSISSIPPI GOVERNMENTAL ENTITIES THAT  
EXCEED STATE REPORTING DEADLINES

A Dissertation  
presented in partial fulfillment of requirements  
for the degree of Doctor of Philosophy  
in the School of Accountancy  
The University of Mississippi

by

COREY S. CAGLE

March 2012

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## ABSTRACT

For governmental audit and compilation reports to be relevant, they must be prepared and made available to the public in a timely manner. The purpose of this study is to identify variables that have an influence on audit and compilation report delay in governments. This research utilizes ordinary-least-squares regression to estimate the effects of several variables of interest on the time it takes to file the audit or compilation report with the Office of the State Auditor. The research also utilizes logistic regression to estimate the effects of several variables of interest on the incidence of filing the audit or compilation report after the state-mandated filing deadline versus filing on time. Data were gathered from audit and compilation reports of Mississippi counties and municipalities for fiscal-year 2007.

The research questions addressed in this study were chosen based on the anticipated impact on audit timeliness of (1) report message content and managerial competency, (2) accountability, and (3) the audit environment. The results of the study indicate that the areas of report message content and managerial competency as well as the audit environment both play an important role in audit report and compilation report timeliness. The government's level of accountability was found to be less associated with report timeliness.

A higher number of audit findings was found to be associated with longer audit report delay and longer compilation report delay as well as with late audits and late compilations. Entities receiving an adverse or qualified opinion were significantly associated with longer audit report delay as well as with late audits. The travel distance between the auditor's office and the audit client's office was also found to play a role in audit and compilation report timeliness. For

full-scope audit engagements, a greater travel distance was associated with late audit filings, particularly when entities that represented their audit firm's only governmental attestation client were removed from the sample. Travel distance played a more important role with compilation engagements, as it was significantly associated with compilation report delay and was associated, to a lesser degree, with late compilation reports. A greater amount of long-term debt carried by the governmental entity was not found to be associated with shorter audit delays but was found to be somewhat associated with audits filed within the state-mandated one-year window. Overall, these results provide useful information for both small and large governmental entities that wish to improve the timeliness of their financial reporting.

## DEDICATION

This dissertation is dedicated to my wife, Laurie Cagle, who has stood by me and supported me throughout this process from beginning to end and who has listened with genuine interest to everything I have had to say regarding this work.

## LIST OF ABBREVIATIONS AND SYMBOLS

CAFR	Comprehensive annual financial report
CPA	Certified Public Accountant
GAAP	Generally accepted accounting principles
GAGAS	Generally accepted government auditing standards
GAO	Government Accountability Office
GASB	Governmental Accounting Standards Board
GEE	Generalized estimating equation
GFOA	Government Finance Officers Association
NFMA	National Association of Municipal Analysts
OCBOA	Other comprehensive basis of accounting
OLS	Ordinary least squares
OMB	Office of Management and Budget
OSA	Office of the State Auditor
SEC	Securities and Exchange Commission
VIF	Variance inflation factor

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## **CHAPTER I - INTRODUCTION**

The primary purpose of a financial-statement audit is to provide a level of assurance concerning whether an entity's financial statements are presented fairly in conformity with specified criteria. For local governmental entities, audited financial statements are the primary means for communicating the results of operations and financial position to outside parties. The auditor's report also provides important information about the management of the government, such as the adequacy of internal controls and compliance with laws and regulations. For auditors' reports to be relevant, they must be prepared and made available to the public in a timely manner.

Many smaller governmental entities are not required to undergo a full-scope audit of their financial statements. These entities are allowed to prepare a compiled financial report that presents the government's cash receipts and disbursements during the period. In lieu of a full-scope audit, these entities are subject to an independent auditor's performance of certain agreed-upon procedures, such as confirmation of cash balances, verification of tax collections, and examination of compliance with purchasing requirements. Like full-scope audit reports, these compilation reports are the primary means for communicating information about the management of the government. To be relevant to interested users, these reports must also be prepared and made available to the public in a timely manner.



## **Governmental Financial Reporting and Concerns for Timeliness**

The timeliness of governmental financial reporting is of primary interest to many parties, including the U.S. Congress, federal granting agencies, creditors, government officials, and private citizens. The Governmental Accounting Standards Board (GASB), whose mission is to ensure greater accountability and well informed decision making through excellence in public-sector financial reporting, highlights the importance of the timeliness of audited financial statements. *GASB Concepts Statement No. 1: Objectives of Financial Reporting* lists timeliness, along with relevance, reliability, understandability, comparability, and consistency, as one of the six qualitative characteristics necessary for effective financial reporting. The GASB further states within that Concepts Statement that “if financial statements are to be useful, they must be issued soon enough after the reported events to affect decisions” (GASB 1987, p.24).

Jones et al. (1985) suggests that the inclusion of timeliness in *Concepts Statement No. 1* was perhaps in response to the results of a study the GASB published in 1985, which indicated that approximately 90 percent of all users of governmental financial reports believed timeliness to be an important characteristic of governmental financial reporting. Of 72 items investigated by the GASB in that study, timely issuance of audited financial reports was most often rated by interviewees as “useful” or “extremely useful”, thus ranking timeliness as one of the most important aspects of financial reporting.

It appears, however, that the timeliness objective has not often been achieved in governmental financial reporting. In the mid-1990s, the GASB conducted a series of focus-group sessions, which resulted in interviewees complaining that municipal audit delay had become a significant problem for financial statement users (Crain & Bean 1998). Many of the

participants in these studies indicated that the best improvement in financial reporting would be to require the timely production of audited financial reports (Crain 1998).

In 1998, the National Federation of Municipal Analysts (NFMA), an organization with the goals of promoting professionalism in municipal credit analysis and furthering the skill level of its members, issued a position paper concerning the Securities and Exchange Commission (SEC)'s amendments to Rule 15c2-12. According to the SEC, the amendments to that Rule were designed to enhance the quality, timing, and dissemination of disclosure in the municipal securities market. The NFMA's position paper stated that "the goal of increasing the availability of timely information has been hampered by the absence of a filing deadline" (NFMA 1998). The NFMA stated that outdated financial information is, at best, worthless, and, at worst, materially misleading with respect to the current condition of the issuer. The Federation recommended that amendments be further modified to require annual updated information to be filed within 180 days of fiscal year end for tax-supported governmental bond issues and within 120 days for revenue-bond and private-activity-bond issues. At present, no such amendment has been promulgated.

Currently, the timeliness of financial reporting is one of the most frequent and common concerns expressed to the GASB by users of state and local governmental financial reports. In 2005, the GASB, as part of an extensive study of the needs of users of governmental financial information, interviewed more than 250 financial-statement users. One of the questions presented to interviewees was "What issues would you like to bring to the GASB's attention?". The overwhelming first response was that audited financial statements needed to be issued in a more timely manner (Mead 2011). In a 2011 Research Brief, the GASB published the results of a survey of users of governmental financial statements concerning the usefulness of reported

financial information as time progresses. Findings from that study indicated that financial information retains some of its usefulness for up to six months after fiscal year end, but the relative usefulness of that information diminishes quickly as time progresses within those six months. That study also compared the actual time to issue audited financial statements to the survey results. This comparison indicated that the reported information was seriously diminished due to the timing of reporting in 23 percent of larger governmental financial reports and 44 percent of smaller governmental financial reports (Mead 2011).

Findings from Merritt (2010) and Mead (2011) indicated that even with the concern expressed by various financial statement users, the timeliness of the preparation and subsequent audit of governmental financial statements is not improving. In fact, comparing the audit delay<sup>1</sup> findings from Dwyer & Wilson (1989) to the findings from Merritt (2010) and Mead (2011), the delay has increased by approximately two months since that earliest study.<sup>2</sup> Dwyer & Wilson (1989) noted an average audit delay for municipalities of approximately 107 days, while Merritt (2010) and Mead (2011) each noted an average audit delay of around 170 days.

### **Concerns for Audit Timeliness in Mississippi**

Cagle & Pridgen (2011), in their examination of counties in Mississippi, reported an average audit delay of 420 days. In contrast, Mead (2011) reported an average audit delay of around 244 days for similar-sized counties in other states. A comparison of these studies provides a clear indication of the extent of a timeliness problem existing in Mississippi.

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<sup>1</sup> Audit delay has been defined in prior empirical studies as the number of days from the governmental entity's fiscal year end to the date of the audit report, although Dwyer & Wilson (1989) performed additional analysis of the time from the entity's fiscal year end to the date the audit report was actually mailed to the appropriate agency. In this current study, audit delay is defined as the number of days from the governmental entity's fiscal year end to the date the audited financial statements were received by the office of the state auditor since that date is closer to the time in which the financial statements are available to the public.

<sup>2</sup> A thorough examination of these studies is presented in Chapter II.

Section 21-35-31 (1) of the Mississippi Code (Code) requires all municipalities to have an annual audit or compilation, depending on the magnitude of the municipality's revenues or expenditures. All Mississippi counties are required to have a full-scope audit. According to the Code, the engagements shall be completed before the close of the next succeeding fiscal year. The state has, however, experienced problems concerning the completion of those engagements within that specified time. For example, in December 2009, Hinds County Supervisor, Phil Fisher, was quoted as saying "For years the county ran two years behind—for whatever reasons—getting its audit done" (Baydala 2009). Considering the findings from Cagle & Pridgen's (2011) study of Mississippi counties, which indicated an average audit delay of 420 days, it is evident that other Mississippi counties have also experienced timeliness difficulties.

Carslaw et al. (2007) suggests that an apparent lack of significant discipline has allowed governmental entities to function outside of proper accounting procedures without consequence, and that noncompliance provides great opportunity for fraud. That study states that consequences should be introduced to ensure compliance. The authors suggest that the government institute a policy that grant monies would be reduced in years subsequent to failure in compliance.

Timely completion of county and municipal audits in Mississippi has become an important issue in the state, and new consequences have been introduced to help ensure that future timeliness will be enhanced. The *Mississippi Municipal Audit Guide*, dated July 2010, outlines the steps that will be taken for those entities that fail to submit a timely audit report to the state auditor. If the state auditor determines that a municipality has not initiated efforts to comply with reporting deadlines, the state auditor will file a certified written notice with the clerk of the municipality notifying that a certificate of noncompliance will be issued to the State

Tax Commission and to the Attorney General after 30 days unless the municipality substantially complies with filing requirements within that time. If, after 30 days, the municipality has not substantially initiated efforts to comply, the State Tax Commission will withhold from all allocations and payments to the municipality the amount necessary to pay 150 percent of the cost of preparing the required audit or report as contracted for by the state auditor. The State Tax Commission will transfer those amounts to the state auditor to be used in completing the audit. All funds remaining after the completion of the audit will be retained by the state auditor to offset administrative costs.

In addition to the potential for counties and municipalities to lose 150 percent of the cost of the audit, those entities also face the danger of losing certain federal funds. In Hinds County, for example, missed audit reporting deadlines have held up \$1.6 million in stimulus grants for repaving roads and more than \$1 million for beautification work. Since local governments must spend stimulus dollars by certain deadlines, there are concerns that the county could lose the funding altogether. Also, money allotted for beautification was from a competitive pool that is “first come, first served,” meaning it could go to another county or city (Baydala 2009).

To provide a clearer picture of the extent of the timeliness problem in Mississippi, one can examine the mean audit delay observed in prior studies compared with the mean audit delay that has occurred in Mississippi. In nine studies examining data during the periods from 1982 to 2009, the mean audit report delay ranged from a low of 100 days to a high of 8.13 months (approximately 244 days). The mean audit report delay in Mississippi for fiscal year 2007 was 403 days for counties and 267 days for municipalities.<sup>3</sup> Additionally, Payne & Jenson (2002)

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<sup>3</sup> Audit report delay in these prior studies was defined as the number of days from the government’s fiscal year end to the date on the audit report. In fiscal-year 2007, for Mississippi entities, the average number of days from the fiscal year end to the date on the audit report was 403 days for counties and 267 days for municipalities,

examined audit delay among eight southeastern states and observed that Mississippi had the longest audit delay of any of the sampled states. A thorough examination of each of these studies is presented in Chapter II.

### **Statement of the Research Questions**

The purpose of this study is to examine what variables influence audit delay for local governments in Mississippi. Since the Mississippi Code provides a one-year deadline for submission of the completed audits to the state auditor, this study also considers the determinants of late audit filings in Mississippi and what variables differ between governments that file audits late versus governments that file audits in a timely manner. The study also examines what variables influence the delay of compilation reports for smaller municipalities in Mississippi, as well as the variables that differ between governments that file compilations late versus governments that file compilations in a timely manner. The research questions addressed in this study are chosen based on the anticipated impact on audit timeliness of (1) report message content and managerial competency, (2) accountability, and (3) the audit environment.

Administrators and elected officials are expected to signal fiscal competence and stewardship to the citizens, investors, and other users (McLelland & Giroux 2000). Hirshleifer (1993) suggested that managers' incentives are to advance the arrival of good news and to delay the arrival of bad news. One circumstance in which management has incentive to signal competent performance is when there exists a favorable message to be reported. Elements of a favorable report message include strong financial performance, an absence of audit findings in the auditor's report, and an unqualified audit opinion. A favorable report message will result, in

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while the average number of days from fiscal year end to the date the Office of the State Auditor received the report was 489 days for counties and 344 days for municipalities.

part, from competent management of the governmental entity. Concerning the impact of report message content and managerial competency on audit timeliness, the following research questions are addressed in this study:

- 1) Is the financial report message, as evidenced by key financial statement ratios, a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
- 2) Is the total number of reported audit findings a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
- 3) Is a qualified or adverse audit opinion a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

Differing levels of accountability may also influence the timing of the audit report. For example, the presence of debt is expected to increase monitoring of municipal performance by creditors (Evans & Patton 1987). Also, entities subject to the additional requirements imposed by the Single Audit Act have a greater level of accountability, and Single Audit reports are subject to earlier deadlines in which reports must be submitted to the Federal Audit Clearinghouse. Concerning the impact of increased accountability to outside parties, the following research questions are addressed in this study:

- 4) Is the amount of bonded and other long-term indebtedness a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
  
- 5) Is the earlier filing deadline required under the Single Audit Act a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

Finally, the audit environment unique to each governmental entity may also impact the timing of the audit report. The various complexities of an audit can lead to potential delays, while the expertise of the auditor can also have an effect on the time it takes to complete the audit in a timely manner. Concerning the impact of the audit environment, the following research questions are addressed in this study:

- 6) Is the number of major funds reported in the government's financial statements a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
  
- 7) Is the number of miles between the auditor's office and the audit client's office a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?



- 8) Is the total number of governmental attestation engagements performed by the audit firm a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

Smaller municipalities in Mississippi are allowed to submit a compilation report to the state auditor in lieu of a full-scope audit. The auditors of those entities are only required to complete certain limited agreed-upon procedures. As such, many of the research questions outlined above will not be applicable to those engagements. The compiled financial statements, for example, are limited to a statement of cash receipts and disbursements, therefore key financial ratios based on accrual accounting often cannot be extracted from those statements. Also, the auditor expresses no opinion concerning the fair presentation of financial information. Finally, municipalities required to file according to the Single Audit Act must also complete a full-scope audit. With respect to these limited-scope engagements, the following research questions are addressed in this study:

- 9) Is the total number of reported findings a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?
- 10) Is the amount of bonded and other long-term indebtedness a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

- 11) Is the number of funds reported in the government's financial statements a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?
- 12) Is the number of miles between the auditor's office and the compilation client's office a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?
- 13) Is the total number of governmental attestation engagements performed by the audit firm a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

### **Research Design and Methodology**

This research utilizes ordinary-least-squares (OLS) regression to estimate the effects of several variables of interest on the time it takes to file the audit report with the Mississippi Office of the State Auditor (OSA). The research also utilizes logistic regression to estimate the effects of several variables of interest on the incidence of filing the audit report after the state-mandated one-year filing deadline versus filing on time. OLS regression is also used to estimate the effects of several variables of interest on the time it takes to file compilation reports with the state auditor, and logistic regression is used to estimate the effects of variables of interest on the incidence of filing the compilation report after the state-mandated one-year filing deadline versus filing on time.

The majority of the prior studies of governmental audit delay measured audit delay as the number of days between the governmental entity's fiscal year end and the date on the audit report. In this study, audit delay is measured as the number of days between the entity's fiscal year end and the date the audit or compilation was received by the state auditor's office. This measure is perceived to be superior, as it more closely represents the date in which the reports are made available to the public. The date on the audit report is also subject to manipulation and inconsistent interpretation and application of the auditing standards. *Statement on Auditing Standards No. 103: Audit Documentation*, which was effective for audits after December 15, 2006, affected the dating of the audit report. According to that Statement, audit reports are to be dated no earlier than the date on which the auditor has obtained sufficient appropriate evidence to support the opinion. Sufficient appropriate evidence includes evidence that the documentation has been reviewed and that the financial statements have been prepared and that management has represented that they have taken responsibility for them. Prior to this Statement, the date on the audit report was made in reference to the end of field work. This reference now ceases to exist, therefore the report date and the release date should be close to each other.

In this study, cities and counties required to complete full-scope audits had an average time of 312 days from fiscal year end to the date on the audit report versus an average time of 400 days from fiscal year end to the date the audit report was received by the state auditor's office. Mississippi entities allowed to complete a compilation engagement had an average time of 232 days from fiscal year end to the date on the compilation report versus an average time of 289 days from fiscal year end to the date the compilation report was received by the state auditor's office. These figures provide information that the concepts underlying *SAS No. 103* were not consistently applied in Mississippi for fiscal-year 2007. As such, the time from fiscal

year end to the date the report was received by the state auditor's office is the most appropriate measure to use in this study to capture true audit report delay.

Data used in the study will include all county and municipal audit reports filed in Mississippi for fiscal-year 2007, with the exception of audits completed by the OSA. Fiscal-year 2007 was chosen because it was the most recent year in which substantially all the audit reports were completed and available for examination.

## **Results**

The results of the study indicate that the area of report message content and managerial competency plays an important role in audit report and compilation report timeliness. In this area, financial statement ratios, measuring financial position and performance; the number of audit findings; and the type of audit opinion were examined. Each was found to have some relation to report timeliness.

An examination of two key financial statement ratios in the study revealed somewhat conflicting results. The financial position of the entity, as reflected by the ratio of total net assets to total revenues, was not significantly associated with audit delay. Interestingly, an examination of the financial performance of the entity, as reflected by the ratio of the change in net assets to total revenues, revealed an association with longer audit delay, which was opposite of the direction predicted. This relationship was significant but was influenced by an outlying observation. When the outlier was removed from the model, the relationship was no longer statistically significant. The findings regarding these ratios warrant future research regarding their effect on audit timeliness.

The number of audit findings, a variable that has been previously unexamined in municipal audit delay, was significant in explaining audit delay. A higher number of audit findings was associated with longer reporting delays as well as with late audits. Further examination into this area revealed evidence that the quantity of findings influenced audit report timing to a greater degree than did the materiality of those findings. The number of findings was also significantly associated with longer delays for compilation reports as well as with late compilation reports.

Entities receiving an adverse or qualified opinion were significantly associated with longer audit delays as well as with late audits. The majority of the prior studies of governmental audit delay (Dwyer & Wilson, 1989; Rubin, 1992; and McClelland & Giroux, 2000) did not find a significant association between the audit opinion and audit delay. Payne & Jenson (2002), however, found that a qualified audit opinion was significantly associated with longer delays. The finding in this study is consistent with Payne & Jenson (2002) and provides further evidence to support their finding.

The government's level of accountability was found to be less associated with report timeliness. In that area, the research examined the amount of long-term debt held by the governmental entity as well as whether the entity was required to report according to the requirements of the Single Audit Act. A greater amount of long-term debt carried by the entity was not found to be associated with shorter audit delays but was found to be somewhat associated with audits filed within the state-mandated one-year window. The amount of long-term debt was not significantly related to shorter delays or timely reports for entities preparing compilation reports. Governmental entities required to report in accordance with the

requirements of the Single Audit Act were not found to have had shorter audit delays nor were they found to have reported in a timely manner because of the increased accountability.

The audit environment was found to play an important role in audit report and compilation report timeliness. In that area, the research examined the total number of funds reported by the entity, the travel distance between the auditor's office and the audit client's office, and the level of expertise of the auditor.

The number of major funds was not significantly associated with longer audit reporting delays or late audits. When the variable was recoded as a categorical variable similar to prior research (coded 0 if the entity reported three or fewer major funds and 1 if the entity reported greater than three funds), the number of major funds was still not associated with longer audit reporting delays but was somewhat associated with late audits. The number of funds was not associated with longer compilation reporting delays or late compilations.

Results of the study provided evidence that the travel distance between the auditor's office and the audit client's office, a variable that has not previously been examined in prior studies of governmental audit delay, plays a role in audit timeliness. For full-scope audit engagements, a greater travel distance was not associated with longer audit delay but was associated with late audit filings, particularly when entities that represented their audit firm's only governmental attestation client were removed from the sample. Travel distance played a more important role with compilation engagements. Travel distance was significantly associated with compilation report delay and was associated, to a lesser degree, with late compilation reports.

The auditor's expertise, as measured by the total number of governmental attestation engagements the firm completed for the fiscal year, had no significant association with audit

report delay or with late audits. For compilations, some evidence was observed that indicated that auditor expertise led to shorter compilation report delay. Auditor expertise was not found to have a significant relationship with late versus timely compilations.

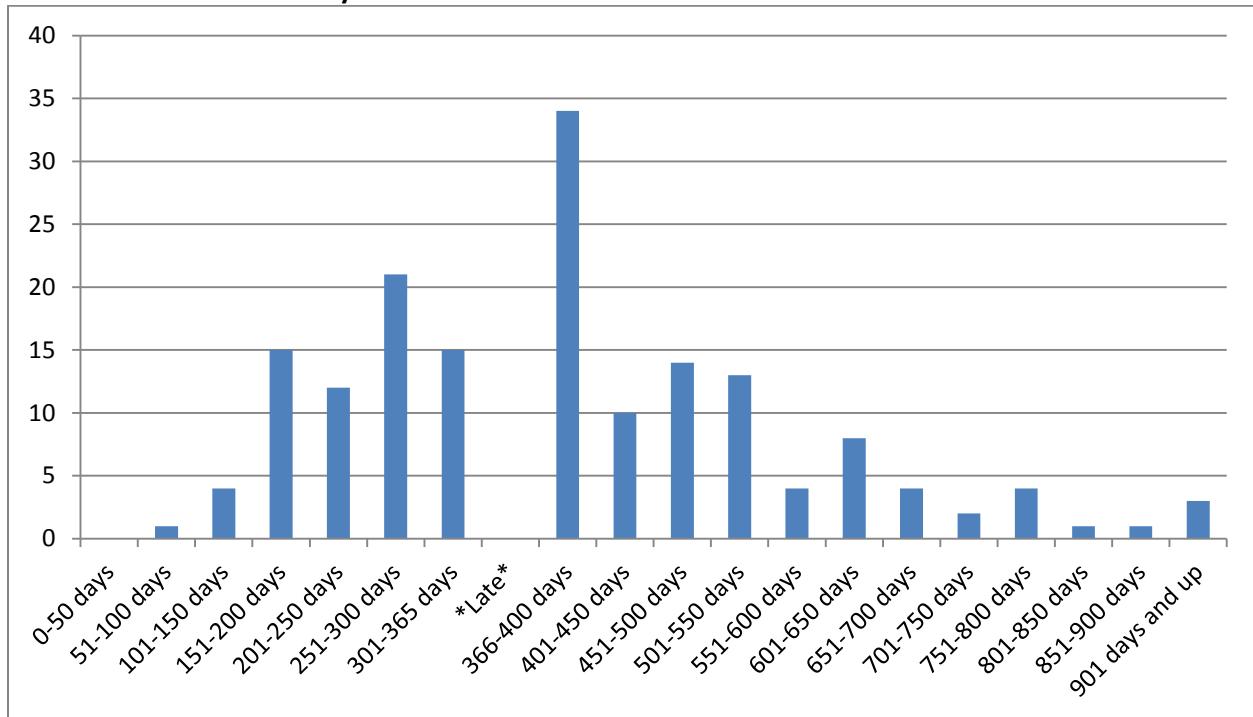
In the model for full-scope audits, a control variable was included coded 0 if the government was a municipality and 1 if the government was a county. Consistent with findings from prior research (Johnson 1998), counties in this study were associated with significantly longer reporting delays when compared with municipalities. Counties were also significantly associated with late audits.

As previously mentioned, prior studies of governmental audit delay measured delay as the number of days between the entity's fiscal year end and the date on the audit report. The findings from this study were based on the measurement of audit delay as the number of days between the entity's fiscal year end and the date the report was received by the state auditor's office. This measure is deemed to be superior since it more closely captures the time in which reports will be made available to the public and is less subject to manipulation and inconsistent application of the auditing standards. For purposes of comparison, the OLS and logistic regressions from this study were also completed after measuring delay consistent with prior research. These results yielded some inconsistencies regarding the variables in the model when compared with the results from the model in which delay was measured as the number of days between fiscal year end and the date in which the reports were received by the state auditor's office. This indicates that the method in which audit report delay is defined can influence the findings regarding variables perceived to affect audit delay.

## Importance of the Research

Figure 1 presents a histogram illustrating the frequencies in which Mississippi governments completing full-scope audits for fiscal-year 2007 filed those audits during certain ranges of time with the Mississippi Office of the State Auditor. The most populated category in the histogram is the window of time from 366 days to 400 days. This indicates that many governments in Mississippi missed the filing deadline by approximately a month or less. With a better understanding of the factors that affect audit timeliness, these entities may better be able to decrease reporting time and avoid the ramifications of the newly established consequences set forth in the *Mississippi Municipal Audit Guide*.

**Figure 1: Frequencies in Which Full-Scope Audit Reports Were Submitted to the Mississippi Office of the State Auditor for Fiscal-year 2007**



The findings from this study are important not only to governmental entities but also to governmental auditors, state auditors, and other third parties, such as creditors and federal



granting agencies, that use governmental financial statement information. Governmental entities desiring a more timely audit for any reason, such as the desire to obtain grant monies, can use the information to help determine if selection of an auditor with different characteristics than their current auditor might aid in timeliness. The study may also highlight areas of potential improvement within the governmental entity that might aid in audit timeliness.

For governmental auditors concerned with audit timeliness, this study may provide information concerning client-specific attributes that affect the timeliness of completing the audit. Knowledge of these variables may help these auditors in determining whether to accept a certain audit client for a future engagement and whether that engagement may be completed in a timely manner. As parties become more aware of the types of variables that influence audit timing, steps can be taken to improve overall timeliness.

Also, as previously mentioned, Mississippi is taking new steps, effective July 2010, to help ensure that future timeliness will be enhanced. The current study examines reporting timeliness for fiscal-year 2007, before these new steps were taken. As such, the findings from this study will provide a reference point for a future study concerning the success of these steps after they have been instituted in Mississippi. This study is an important first step in determining whether “the goal of increasing the availability of timely information has been hampered by the absence of a filing deadline” (NFMA 1998).

### **Contributions of the Study**

This study adds to the existing literature in a number of ways. A major contribution of this study is that it is the first study of governmental audit delay to examine differences between entities that file audits in a timely manner versus entities that fail to meet audit reporting

deadlines. The study measures audit delay as the time between fiscal year end and the date the report is received by the state auditor's office. This measure more closely captures the time in which the reports are made available to the public. The study also illustrates that the effects of some variables differ depending on whether audit delay is measured as the time between fiscal year end and the date on the audit report (as most prior studies have measured delay) or the time between fiscal year end and the date the report is received by the state auditor's office. Another major contribution is that this is the first study to examine reporting delay for governmental entities required only to submit a compilation report in lieu of completing and submitting a full-scope audit report.

Also, since the most recent empirical study of audit timeliness in local governments (McLelland & Giroux 2000) examined data from fiscal year 1996, this is the first empirical study that has considered timeliness following the enactment of GASB Statement No. 34. Additionally, prior studies (Dwyer & Wilson, 1989; Rubin, 1992; Johnson, 1996; Johnson, 1998; McLelland & Giroux, 2000; Johnson et al., 2002; Payne & Jenson, 2002) have only considered municipalities with populations greater than 5,000. The majority (approximately 79 percent) of the populations of municipalities in Mississippi fall below 5,000. This study also includes several variables expected to influence governmental audit delay that prior studies have not considered. These include financial statement ratios measuring financial position and performance, audit findings, number of reported major funds, and travel distance between the auditor's office and the audit client's office.

## **Limitations of the Study**

The expected results of this study are subject to some important limitations. The sample for this study was not randomly obtained but instead uses data from counties and municipalities from one state. As such, caution should be used in generalizing these results to other geographic regions. Also, the smaller populations of the observations in this study are not comparable to the larger populations of the samples examined in prior studies. Since this study examines several variables not addressed in prior studies, the findings regarding those variables may not be generalizable to entities with larger populations.

In logistic regression, a rule of thumb states that about ten events per variable are necessary in order to get reasonably stable estimates of the regression coefficients (Peduzzi et al. 1996). The logistic regression model for full-scope-audit entities in the study has about seven events per variable. Although more recent research has concluded that the “Rule of Ten” can be relaxed (Vittinghoff & McCulloch 2006), an increased sample size in this study could have possibly led to different conclusions.

Finally, the explanatory power of the OLS model for the full-scope-audit entities in this study compares quite favorably to the models used in prior studies. The explanatory model of the OLS model for compilation entities, however, is weaker in comparison. Future research will be warranted to gain a better understanding of those areas that influence delay for these types of engagements.

## **Organization**

The following chapters of this dissertation are organized as follows. Chapter Two includes a literature review of prior empirical work related to governmental audit delay. Chapter

Three states the research questions and summarizes the methodologies used to analyze the variables that impact audit delay and the variables that differ between entities filing audits within the specified time period versus the entities that fail to file in a timely manner. Chapter Four explains the results of the dissertation, and Chapter Five summarizes the conclusions and limitations of this study.

## **CHAPTER II - LITERATURE REVIEW**

Several studies have addressed the issue of audit delay as it relates to governmental entities. Each study established audit delay, measured as the number of days from the governmental entity's fiscal year end to the date on the audit report, as the dependent variable and utilized ordinary-least-squares (OLS) regression to gather evidence about the effects of a number of independent variables. Beginning with Dwyer & Wilson (1989), each study incorporated different combinations of independent variables, often removing some of the variables from the prior studies, retaining others, and adding new variables not considered in prior studies.

### **Prior Research on Audit Delay in Local Governments**

It is important to note the differences in sample characteristics across each of the prior studies of governmental audit delay before the studies are examined in detail. Key characteristics and mean audit report delay for each previous study are summarized in Table 1. Dwyer & Wilson (1989) investigated a sample of 142 cities for fiscal year 1982 and developed an explanatory model of reporting timeliness based on incentives for management signaling, the message contained within the annual report, and regulatory and technological constraints. Rubin (1992) examined 79 Ohio cities with populations greater than 10,000 for fiscal year 1986 and assessed the differences in audit fees charged and audit timeliness between state and private-sector auditors. Johnson (1996) examined 192 comprehensive annual financial reports (CAFRs) of cities with populations greater than 50,000. That study built on the prior literature by

**Table 1 - Prior Studies of Local Government Audit Delay**

<b>Study</b>	<b>n</b>	<b>Fiscal Year</b>	<b>Sample Characteristics</b>	<b>Mean Audit Report Lag</b>
Dwyer and Wilson, 1989	142	1982	U.S. cities with available time series bond data; Population > 25,000	3.56 months (approx. 107 days)
Rubin, 1992	79	1986	Ohio cities; Population > 10,000	8.13 months (approx. 244 days)
Johnson, 1996	192	1993	U.S. cities with CAFRs; Population > 50,000	115 days
Johnson, 1998	289	1993	U.S. cities with CAFRs and U.S. counties Population > 20,000	121 days
McLelland and Giroux, 2000	164	1996	U.S. cities; Population > 100,000	125 days
Johnson et al., 2002	302	1993	U.S. cities with CAFRs and U.S. counties Population > 20,000	122 days
Payne and Jenson, 2002	410	1992	Cities in eight states; Population > 5,000 or Expenditures > \$100,000	100 days
Merritt, 2010	450 250	2007- 2009	U.S. cities issuing bonds U.S. counties issuing bonds	168 days 172 days
Mead, 2011	294 276 130 131	2006- 2008	Largest U.S. cities Largest U.S. counties Cities: Revenues between \$10 million and \$100 million Counties: Revenues between \$10 million and \$100 million	182 days 172 days 187 days 244 days

examining fiscal-year 1993 data, which addressed developments in governmental financial reporting since the early 1980s, and it included additional variables not included in the prior studies. Johnson (1998) examined 289 CAFRs of local governments with populations of 20,000 or more for fiscal year 1993 and extended prior research by considering additional explanatory variables and by comparing city and county audit delay. McLelland & Giroux (2000) examined 164 cities with populations greater than 100,000 for fiscal year 1996. Johnson et al. (2002) examined 302 cities and counties for fiscal year 1993 and provided further evidence on the effect of seasonal variations in auditor workload on audit fees and audit delay. Payne & Jenson (2002) examined 410 cities with populations greater than 5,000 (or expenditures greater than \$100,000) for fiscal year 1992 and investigated the effects of auditor and auditee characteristics on audit delay. Merritt (2010) was a descriptive study of audits of 250 counties and 450 cities that issued municipal bonds, using data from 2007 to 2009. Mead (2011) examined audits of the largest counties and largest cities in the United States, as well as randomly selected local governments for fiscal years 2006 to 2008. The study compared actual audit delay to survey results concerning the usefulness of the reported information with the passage of time.

*Dwyer & Wilson (1989)*

Dwyer & Wilson (1989) developed and tested hypotheses related to municipal reporting timeliness by establishing a model based, in part, on the underlying assumption that timely reporting is one means available to municipal officials to signal above-average competence in financial management. Three separate models were tested, each using a different dependent variable. The dependent variables included (1) the time between fiscal year end and audit report date (the report-time model), (2) the time between audit report date and the mailing of the

financial statements to the state authorities (the mail-time model), and (3) the total time between fiscal year end and the mailing date (the total-time model). Each of the regression models included the same independent variables. The authors developed four hypotheses concerning those variables.

The authors hypothesized an inverse relationship between favorable report message content and municipal reporting time delay, arguing that municipal officials may have incentive to report promptly when the message to be reported is favorable. Two proxies were used for report message content. The first was financial viability, measured by the ratio of general fund balance to general fund revenues. The second proxy was the type of auditor opinion. Some support for this hypothesis was observed. Both variables were significant for the mail-time model. Neither was significant for the report-time model or the total-time model.

The authors also hypothesized an inverse relationship between the level of municipal officials' competence and municipal reporting time delay. Two proxies were used to capture professional competence. The first was an indicator variable, coded 1 if the municipality had a professional manager-council form of government. The authors included this variable, citing Evans & Patton (1983), arguing that city managers tend to be non-elected professional administrators whose future may depend upon current positive recognition and that professionally trained city managers are likely to be more competent. This variable was not significant in any of the models. The second proxy for professional competence was participation in the Government Finance Officers Association (GFOA) Certificate of Conformance Program. This variable was significant and in the predicted direction in the report-time model and the total-time model.



The authors hypothesized a positive relationship between technological constraints and timeliness of municipal financial reporting. Four proxies were used to capture technological constraints. The first was whether the auditor completed the audit during their traditional busy season, which the authors defined as October 31 to March 31. This variable was not significant in any of the models. The second was whether the municipality used a private-sector auditor or a public-sector (i.e. state) auditor. The authors argued that the use of a state auditor is often associated with longer reporting time. This variable was significant only in the report-time model. The third was whether the auditing firm assumed responsibility for the annual report printing. The authors stated that when the municipality assumes responsibility for printing the annual report, incentives to hurry or delay printing may exist depending on the type of news contained within the report. Conversely, the auditor has no incentive to delay the printing of the report. No significant relationship was observed concerning this variable. The fourth proxy the authors used to capture technological constraints was the natural log of the population of the municipality. This variable was included to capture the effects of transaction volume and organizational complexity. This variable was not significant in any of the models.

Finally, Dwyer & Wilson hypothesized that regulatory constraints are positively related to the timeliness of municipal financial reporting. Two proxies were used to capture regulatory effects. The first was whether the municipality was subject to state regulation of accounting, such as which type of accounting basis the municipality must use. Those municipalities that were subject to state regulation of accounting were found to have a significantly increased reporting delay, as the variable was significant in both the total-time and report-time models. The second proxy was whether the municipality was subject to state regulation of reporting, such

as a state-regulated reporting deadline. This variable was moderately significant ( $p < 0.10$ ) in the report-time model and was found to decrease reporting delay.

In summary, Dwyer & Wilson's findings provide evidence that a municipality's financial viability, a clean audit opinion, and participation in the GFOA Certificate Program may all be associated with decreased audit report time. In contrast, some evidence is presented that use of a state auditor rather than an independent auditor and state regulation of accounting may lead to increased audit reporting time.

### *Rubin (1992)*

Rubin (1992) assessed the differences in audit fees charged and the differences in audit timeliness between state and private-sector auditors. The author used audit time as the dependent variable, which was measured as the time between fiscal year end and the audit report date. Ten independent variables were used, four of which were used in Dwyer & Wilson (1989) and six that were new to that study.

The author's main variable of interest was that of auditor type (private-sector auditor versus state auditor). The other independent variables included (1) the natural log of population, (2) debt per capita, (3) bond rating, (4) whether the municipality issued a Comprehensive Annual Financial Report rather than a general purpose report, (5) the service index, (6) the number of reports issued, (7) whether the municipality was a member of the GFOA, (8) whether the municipality obtained the Certificate of Achievement in Financial Reporting, and (9) the type of audit opinion. The author suggested that debt per capita and a higher bond rating may induce faster reporting. Organization complexity, which may require more audit time, was measured by

a service index. Reporting complexities were also measured by the number of distinct reports the auditors prepared and whether the report was a CAFR.

Auditor type was the only significant variable Rubin observed. Private-sector auditors were found to be associated with shorter audit reporting time. The author suggested that the auditor-type variable may have captured a number of underlying constructs, therefore the regression was computed again after dropping that variable from the model. Results of this regression indicated that the attainment of the Certificate of Achievement for Financial Reporting is associated with shorter audit reporting time. These results, as well as the finding concerning auditor type, were consistent with the findings of Dwyer & Wilson (1989).

*Johnson (1996)*

Dwyer & Wilson (1989) was based on data from 1982, and Rubin (1992) was based on data from 1986. Johnson (1996) added to the literature by considering data from fiscal year 1993 in order to address developments in governmental financial reporting since the mid-1980s. The number of days from fiscal year end to the audit report date was used as the dependent variable. Ten independent variables were used, including seven that had not been previously tested. Seven hypotheses were developed based on those new variables.

The author hypothesized that Big-Six audit firms would perform a more timely audit, since those firms can support the concentration of resources to complete an audit on an accelerated timetable. This hypothesis was not supported. Big-Six audit firms were not found to have completed municipal audits significantly more quickly than any other type of audit firm.

The author included as a variable the scope of the audit that was performed. The author clarified by stating that, at management's discretion, the auditor will opine on (1) the combined

financial statements and the combining and individual fund statements explicitly (a “full-scope” audit report) or (2) the combined financial statements only but assume “in relation to” responsibility for the fair presentation of the combining and individual fund statements. Expression of a full-scope audit was not found to be significantly related to audit delay. The author also hypothesized that the delay in the audit is directly related to the number of component units that exist in the municipal entity. This hypothesis also was not supported.

The author also considered whether there existed a division of responsibility between more than one auditor. The author hypothesized that, due to the potential for problems in coordinating efforts, municipalities for which the auditor’s report indicated a division of responsibility with other auditors sustain a greater delay in the audit. Results of the regression supported this hypothesis.

Dwyer & Wilson (1989) examined timeliness as it related to the traditional busy season of the auditor. Johnson (1996) further examined this issue by redefining “busy season”. Dwyer & Wilson (1989) defined busy season as occurring between October 31 and March 31. Johnson (1996) considered busy season to relate to municipalities having any year end other than September 30 and hypothesized that audit delay is less for municipalities with that year end. Regression results supported that cities with September 30 fiscal year ends experience minimal audit delay.

Johnson (1996) also considered the tenure of the auditor with the specific municipality and hypothesized a negative relationship between auditor tenure and audit delay. This variable was measured as 1 year, 2 years, 3 years, 4 years, or 5 or more years. This variable was not significant in explaining audit delay.

Finally, the author hypothesized that audit fees per capita are related to municipal audit delay. The author stated that since it is possible that audit delay and audit fees may be jointly endogenous, models of audit delay and fees per capita were estimated using two-stage least squares. The estimated models revealed that audit fees do not significantly explain delay, but delay does significantly explain fees per capita.

Johnson (1996) used as control variables (1) the receipt of the Certificate of Achievement for Financial Reporting, (2) the natural log of population, and (3) whether the municipality has a city-manager form of government. Each of these variables was used in prior studies of municipal audit timeliness. In contrast to both Dwyer & Wilson (1989) and Rubin (1992), Johnson (1996) found that receipt of the Certificate of Achievement does not significantly explain delay. Similar to both of these prior studies, Johnson (1996) found no significant relationship between the natural log of population and audit delay. The city-manager variable also was not significant as was similarly observed in the prior studies.

In summary, Johnson (1996) provided evidence that instances where there exists a division of auditor responsibility and instances where the municipality has a year end other than September 30 correlate with increased audit reporting time. In contrast to prior studies, Johnson provided evidence that the receipt of the Certificate of Achievement for Financial Reporting may not significantly correlate with audit delay.

#### *Johnson (1998)*

As a follow-up to the 1996 study, Johnson (1998) extended the work by considering counties in addition to cities. This study also included additional explanatory variables not

considered in prior studies. Seven independent variables were examined, two of which were new to this study.

One variable of interest in the Johnson (1998) study was an indicator variable concerning whether the audited entity was a city or a county. Prior studies had not considered whether delay differs between the two types of governments. Johnson suggested that differences in organizational characteristics may imply differential delay. The author noted that cities are usually organized such that their various service functions are closely coordinated, and county functions are often administered by relatively independent officials. As a result of the comparatively uncoordinated nature of county operations, Johnson expected audit delay to be greater for counties. Regression results supported this assumption.

A second variable of interest in the Johnson (1998) study was whether the audit fees were based on per-hour charges rather than a fixed amount. This information was obtained through questionnaires submitted to each governmental entity examined in the study. The author expected that under a fixed-fee arrangement, the auditor has incentive to limit the amount of test work to a level that would not impair profitability. In contrast, fees computed on a variable basis would provide incentive for the auditors to perform all the audit procedures deemed necessary, thus contributing to audit delay. Regression results provided some evidence to support this ( $p < 0.10$ ).

Other variables used in Johnson (1998) were (1) whether the entity received the Certificate for Achievement in Financial Reporting, (2) whether responsibility for the audit was divided among more than one auditor, (3) whether the audited entity had a September 30 fiscal year end, (4) whether the state prescribed the scope and nature of the audit, and (5) whether the auditor was a public-sector auditor or private-sector auditor. Consistent with Dwyer & Wilson

(1989) and Rubin (1992), but not with Johnson (1996), results of this study provided evidence that attainment of the Certificate of Achievement for Financial Reporting is associated with decreased audit delay. Consistent with Johnson (1996), entities with September 30 fiscal year ends are associated with decreased audit delay, while division of auditor responsibility is associated with increased delay. Results of this study also indicate that state-mandated audit procedures are associated with increased audit delay, which are somewhat in contrast to the findings of Dwyer & Wilson (1989).

*McLelland & Giroux (2000)*

The major contribution of McLelland & Giroux (2000) is that the study examined municipal audit delay for large municipalities. Their research considered only municipalities with populations greater than 100,000. The study examined 13 independent variables, three of which had not been included in prior studies.

One variable included in McLelland & Giroux (2000) was an indicator variable concerning whether the municipality disclosed single-audit reports in the CAFR. The authors noted that cities could voluntarily include additional audit reports required by federal regulations in the annual report and that inclusion of these voluntary reports would represent good news associated with clean opinions. As such, the authors expected this variable to be associated with more timely reporting. Regression results provided evidence to support the authors' assumptions.

Another variable included in this study was an indicator variable concerning whether the city had a municipal web page that included tourism, as well as general and specific information on the city, together with a way to communicate directly with city officials. Cities in the

research sample were considered to have a municipal web page for purposes of the study regardless of whether budget information or financial reports were included on the web page. The authors noted that previous research had found that organizational productivity is positively related to IT investment, therefore they expected the existence of a municipal web page to be associated with decreased audit reporting time. Regression results confirmed the authors' expectations.

Since all municipalities in the sample were subject to Single Audit requirements, the authors captured differential effects of additional federal regulations by considering the ratio of the log of intergovernmental grants to total revenue. The authors expected cities with high grant percentages to have additional regulatory requirements that would require additional audit time. The authors found that higher grant percentages are significantly associated with increased audit delay.

Additional variables used in McLelland & Giroux (2000) included (1) whether the municipality issued a CAFR or general-purpose financial statement, (2) whether the municipality had a professional manager and obtained the Certificate of Achievement for Financial Reporting, (3) whether the auditor reported a clean audit opinion, (4) the municipality's bond rating, (5) the natural log of the city's population, (6) the number of component units and joint ventures, (7) whether the audit was completed by a private-sector auditor or a public-sector auditor, (8) whether the municipality's fiscal year end occurred between October 31 and December 31, (9) whether the audit responsibility was shared among more than one auditor, and (10) whether the municipality was subject to state-mandated accounting regulations. Findings for each variable were similar to findings from prior studies with one exception. While Rubin (1992) did not find significance concerning the preparation of a CAFR versus a general-purpose financial statement,



McLelland & Giroux found that preparation of a CAFR was significantly associated with decreased audit time.

*Johnson et al. (2002)*

Johnson et al. (2002) built upon prior studies by focusing on the government's fiscal year end and its effect on audit delay and audit fees. The research examined CAFRs of municipalities with populations greater than 20,000. Eight variables were considered, one of which had not been considered in prior studies of audit delay.

The major finding of the study, concerning audit delay, was that governments with June and December fiscal year ends sustain equivalent and maximal audit delay, while governments with September year ends experience minimal delay. This finding is consistent with Johnson (1996) and Johnson (1998). Another variable, which was new to this study, was whether the municipal finance officer was a certified public accountant (CPA). The authors found that governments with CPAs are significantly associated with decreased audit time.

As in prior studies, Johnson et al. (2002) found that governments receiving the GFOA Certificate of Achievement experienced significantly less audit delay. The study also found that division of auditor responsibility, variable rather than fixed fee arrangement, and state agency influence on the audit are all significantly associated with increased audit delay. While Johnson (1998) found a significant increase in audit delay for the county form of government in comparison to the city form, Johnson et al. (2002) did not find a significant relationship.

*Payne & Jenson (2002)*

Payne & Jenson (2002) considered cities in eight states in the southeastern United States. A major contribution of this study is that it was the first to consider cities with smaller populations. The sample included cities with populations greater than 5,000 or revenues greater than \$100,000. The study also discussed whether significant influences on audit delay are characteristics of the audit firm or of the audit client, suggesting municipalities can control the audit-firm specific characteristics through the audit procurement process. Sixteen variables were considered, and hypotheses were developed concerning each variable. Several variables examined in this study had not been considered in prior studies.

The authors first hypothesized that a city-manager form of municipal management will reduce audit delay. McLelland & Giroux (2000) had observed this in their study. Payne & Jenson (2002) provided some support for their hypothesis (significant at  $p < 0.10$ ). In their second hypothesis, the authors expected that municipalities receiving the Certificate of Achievement will have reduced audit delay. Consistent with prior studies, the authors found support for this hypothesis.

A new variable considered by Payne & Jenson (2002) was whether bonded indebtedness was present in the government being audited. Dwyer & Wilson (1989) and McLelland & Giroux (2000) had considered bond rating, but none of the studies prior to Payne & Jenson (2002) had considered the mere presence of bonded indebtedness, regardless of the rating. The authors expected that the presence of debt would increase monitoring of municipal performance, and since delayed audit reporting can increase the perception of bad news, the government officials would have incentive to report in a more timely manner. As such, the authors expected that the

presence of bonded indebtedness would be associated with reduced audit delay, and they found evidence to support their expectations.

The authors next hypothesized that the presence of regulations to prohibit solicitation of competitive bidding, the presence of municipal policies to solicit bids for multi-year engagements, and the presence of a competitive audit procurement process will all influence audit delay. The authors did not make directional predictions for the three hypotheses concerning these three variables. The results provided evidence that a state ban on solicitation or competitive bidding was associated with increased audit delay. The other two variables were not significant in the model.

The authors classified the next five hypotheses as being associated with characteristics of the municipality rather than the auditor. The authors expected that large municipalities would have increased audit delay. While prior studies measured municipality size by examining the natural log of population, Payne & Jenson (2002) examined municipal expenditures. Each of the prior studies found no significance regarding the association between population and audit delay. Payne & Jenson, however, found that municipalities with larger total expenditures experience significantly increased audit delay.

The second audit-client-specific hypothesis involved the complexity of the audit. The authors measured this by examining whether the audit client has three or more separate funds in the financial statements. They hypothesized that audit clients with more than three funds would experience greater audit delay due to increased audit complexity. Their hypothesis was not supported.

As in prior studies, the authors hypothesized that audits performed during the auditor's busy season will have increased audit delay. As in prior studies, the results provided evidence to

support this hypothesis. Payne & Jenson (2002) also hypothesized that financial statements issued with a qualified audit opinion will have increased audit delay. Prior studies had not found that the type of audit opinion had any significant relationship with audit delay. Payne & Jenson, however, found that a government receiving a qualified audit opinion is significantly associated with increased audit delay.

A final audit-client-specific hypothesis Payne & Jenson (2002) examined was whether the municipality was required to comply with the Single Audit Act. This had not been explicitly tested in prior studies. The authors hypothesized that the additional requirements of the Single Audit Act would lead to increased audit delay. Results provided some evidence to support this ( $p < 0.10$ ).

The final five hypotheses of Payne & Jenson (2002) involved what the authors classified as auditor-specific characteristics. These related to auditor expertise, auditor tenure, division of auditor responsibility, the number of employees at the audit firm, and auditor size. Auditor expertise was measured by whether the auditor performed two or more municipal audits. The authors expected auditor expertise to be inversely related to audit delay. This hypothesis was supported, thus providing evidence concerning a variable not previously examined in the studies preceding Payne & Jenson (2002).

Auditor tenure with the audit client was not found to be significantly related to audit delay. In contrast to prior studies, division of auditor responsibility was not found to be significant in their model. The number of employees at the audit firm that performed the audit, a variable not previously tested, was found to be significantly associated with audit delay. A larger number of audit employees was associated with decreased audit delay. As in prior studies, the use of a Big-Six audit firm was not found to be significantly associated with audit delay.

*Merritt Research Services (2010)*

Merritt Research Services is an independent research and data provider focused on credit information related to municipal bonds. In a 2010 study, the organization examined audits on different municipal bond entities, spanning a three-year period from 2007 to 2009. Findings from that study indicated that the average time spent by counties to complete their 2009 fiscal year audits was 172.3 days. Approximately 205 counties were included in the sample for the study. Cities were slightly faster, taking an average of 167.7 days. Approximately 450 cities were included in the sample. The study noted that credit quality was not necessarily a factor in how fast or slow the audit was completed, however, weaker or more distressed credits were often found to be on the list of late audits.

*Mead (2011)*

The Governmental Accounting Standards Board issued a Research Brief addressing how long it takes governments to issue financial reports prepared in conformity with GAAP and how the passage of time affects the usefulness of financial report information for decision making. The GASB reviewed financial reports for fiscal years 2006-2008 of the 100 largest counties (based on population) and the 100 largest localities and 50 randomly selected smaller county governments (ranging from \$10 million to \$100 million in annual revenues) and 50 smaller city governments. While all prior studies measured audit report delay as the time between the fiscal year end and the date of the auditor's report, the Mead (2011) study measures delay as the time between fiscal year end and the date of the letter of transmittal.

Results from the study indicated that the mean audit delay for all counties in the sample was 243.89 days, while the mean audit delay for localities was 187.06 days. A comparison of large counties to small counties provided evidence that smaller counties experience a greater audit delay, with larger counties experiencing a mean of 172.17 days versus 243.89 days for smaller counties. A comparison of larger and smaller localities indicated a slightly greater amount of delay for smaller localities (187.06 days) versus larger localities (181.70 days).

In addition to gathering data concerning report timing, the GASB also surveyed users of governmental financial information (bond analysts, citizen/taxpayer groups, and legislative/oversight staff) concerning the usefulness of the financial information with the passage of time. Findings showed that the passage of time diminishes the usefulness of financial information. While 88 percent of respondents considered information received within 45 days of fiscal year end to be “very useful”, the proportion was halved to 43 percent for information received within three months. Less than nine percent of respondents considered information received within six months to be “very useful”. Over half of the respondents considered information received after 12 months to be “not useful at all”.

### **Significant Variables from Prior Research of Audit Delay in Local Governments**

The studies included in the literature review each used OLS regression to determine the effect of several explanatory variables on audit report delay. They also used a wide variety of data from large cities and counties and entities issuing bonds to small cities and counties. Table 2 summarizes the variables found in those studies to be significantly associated with audit report delay. The current study differs from those reviewed in that it considers all counties and cities in

a specific state, regardless of size characteristics and other limiting characteristics, such as issuance of bonds or reporting using a CAFR.

<b>Table 2: Variables Prior Studies Have Shown to be Significantly Associated with Audit Delay</b>	
<b>Decreases Audit Delay</b>	<b>Increases Audit Delay</b>
Receipt of GFOA Certificate of Achievement for Excellence in Financial Reporting <sup>a, b, d, e, f, g</sup>	Audit responsibility divided among two or more auditors <sup>c, d, e, f</sup>
Preparation of CAFR rather than general purpose financial statements <sup>e, g</sup>	Municipal year end coincides with auditor's busy season <sup>c, d, f, g</sup>
Government finance officer is a certified public accountant <sup>f</sup>	Variable rather than fixed fee arrangement with auditor <sup>f</sup>
Auditor is experienced in governmental audits <sup>g</sup>	Large amount of municipal expenditures for the fiscal year <sup>g</sup>
City-form of government rather than other form of government <sup>d</sup>	Presence of state-mandated accounting or auditing requirements <sup>a, d</sup>
Larger number of employees at audit firm that performs the audit <sup>g</sup>	State ban on solicitation or competitive bidding for audit engagements <sup>g</sup>
Presence of bonded indebtedness <sup>g</sup>	Use of public-sector (state) auditor rather than private-sector auditor <sup>a, b, e</sup>
Governmental entity has a web page <sup>e</sup>	Total revenue is made up of a larger portion of intergovernmental revenue <sup>e</sup>
Governmental entity voluntarily includes additional reports <sup>e</sup>	Auditor issued a qualified audit opinion <sup>g</sup>

<sup>a</sup> Dwyer & Wilson (1989)

<sup>b</sup> Rubin (1992)

<sup>c</sup> Johnson (1996)

<sup>d</sup> Johnson (1998)

<sup>e</sup> McLelland & Giroux (2000)

<sup>f</sup> Johnson et al. (2002)

<sup>g</sup> Payne & Jenson (2002)

### **Prior Research of Audit Delay in School Districts**

Also pertinent to this research are the findings of Carshaw et al. (2007) in a study of audit delay in school districts. In that study, the authors examined results from 36,367 audits during the five-year period from 1998 to 2002. The authors noted an average audit delay of anywhere from 245 days to 432 days in the five years analyzed and also noted that the percent of late filers ranged from 9.7 percent to 15.6 percent.

In all five years examined, the authors noted that audit delay was positively associated with the level of expenditures for the year. Other variables that were found to have significantly increased audit delay in all five years of the study include the use of a sole-practitioner auditor rather than a larger firm, the presence of reportable conditions in the audit report, and the presence of material noncompliance in the audit report. The authors also noted that the use of a private-sector auditor rather than the use of a state auditor was associated with decreased audit delay in all five years analyzed in the study.

In four of the five years studied, the authors found that an audit report with an unqualified audit opinion was associated with decreased audit delay. In three of the five years examined, receipt of the GFOA certificate of achievement, the auditor's experience in similar audit engagements, and the classification of the audit client as a low-risk client, were all significantly associated with decreased audit delay.

The study also focused attention on the effects of the results of the Single Audits on audit delay. In three of the five years, the issuance of an unqualified opinion on the report of major programs was found to be significantly related to a decrease in audit delay. The remainder of the findings was mixed. The presence of questioned costs on the audit report significantly increased



audit delay in one of the years, while it significantly decreased audit delay in another year. A similar result was noted regarding the presence of reportable conditions in a major program.

### **Prior Research of Audit Delay in For-Profit Entities**

Researchers have been examining audit delay in for-profit companies since as early as the 1970s. Because of the differing characteristics between for-profit companies versus governmental entities, many of the findings from these studies are not applicable to a study of audit delay in governments. Some findings from prior studies of audit delay in for-profit companies that are relevant to this study are discussed below.

The most consistent finding among the prior studies is that the size of the company is negatively associated with audit delay. It could be reasoned that larger clients require more audit work as a result of complexity and a comparably higher number of transactions. It could also, however, be expected that these larger companies would have more in-house expertise and better internal controls, which would result in a reduction of audit work (Newton & Ashton, 1989). At least 11 prior studies of audit delay (Curtis, 1976; Davies & Whittred, 1980; Givoly & Palmon, 1982; Newton & Ashton, 1989; Ashton et al., 1989; Carslaw & Kaplan, 1991; Bamber et al., 1993; Ng & Tai, 1994; Schwartz & Soo, 1996; Jaggi & Tsui, 1999; Owusu-Ansah, 2000) found that larger companies (often measured by total assets or by total revenues) have a shorter audit delay. This finding is also consistent with the idea that larger companies have a greater incentive for timely disclosure of results, as these companies face greater external pressure to report earnings quickly (Newton & Ashton, 1989; Bamber et al., 1993). Of particular importance is the finding from Ashton et al. (1989) that larger, publicly traded companies are associated with significantly shorter audit delay, while larger, non-public companies are associated with

significantly longer audit delay. This result suggests that incentive for timely disclosure is an underlying factor regarding the association of entity size with audit delay.

Audit-delay research in for-profit companies has also yielded important information regarding the effect of profitability measures on the length of time to completion of the audit. Findings from prior studies appear to confirm that the reporting of bad news tends to be delayed, while the reporting of favorable news tends to be accelerated (Givoly & Palmon, 1982; Chambers & Penman, 1984; Atiase et al. 1989). Ashton et al. (1989), Bamber et al. (1993), Schwartz & Soo (1996), Henderson & Kaplan (2000), and Krishnan (2005) all found that a company with a loss before extraordinary items was significantly more likely to be associated with increased audit delay, and Courtis (1976) found that as a company's profitability increases, audit delay decreases. Similarly, Newton & Ashton (1989) and Ng & Tai (1994) each found that an increased percentage change in earnings from the previous year leads to a decrease in audit delay. Bamber et al. (1993), in examining both audit report delay and earnings announcement delay, found that an increased percentage change in earnings from the previous year did not lead to decreased audit delay but did lead to decreased delay in earnings announcement. This finding provides strong evidence that companies wish to speed up the reporting of favorable news.

Prior studies examined not only the effects of measures of company profitability, but also the effects of measures of financial condition. Bamber et al. (1993) computed a financial condition index which measures a company's probability of bankruptcy. Findings indicated that as the probability of bankruptcy increased, the audit delay also increased. Henderson & Kaplan (2000) also found that as the probability of bankruptcy increased, so did the audit report delay. Davies & Whittred (1980) determined that a higher ratio of debt to total assets was associated with increased audit delay.

Another area of focus for prior studies of audit delay in for-profit companies is that of various complexities that may be inherent in a particular audit or may arise during the course of an audit. At least six prior studies (Newton & Ashton, 1989; Ashton et al., 1989; Bamber et al., 1993; Schwartz & Soo, 1996; Laitinen & Laitinen, 1998; and Henderson & Kaplan, 2000) all found that increased audit delay occurs with the presence of extraordinary items on the audit client's financial statements. Ng & Tai (1994) and Jaggi & Tsui (1999) found that an increased number of company subsidiaries was followed by an increase in audit delay. Ashton et al. (1989) found that audit delay increased for companies with a greater number of reported contingencies, and Henderson & Kaplan (2000) noted that audit delay increased for companies with uncertainties cited in the audit report.

Research has also examined the effect of a certain type of audit opinion on the ultimate delay of the audit report. While Ashton et al. (1989) found that the issuance of a qualified audit opinion leads to decreased audit delay, other studies (Bamber et al., 1993; Schwartz & Soo, 1996; Jaggi & Tsui, 1999; and Soltani, 2002) have found the opposite. Schwartz & Soo (1996) found that an audit report with a going-concern explanatory paragraph was associated with longer audit delay.

While the characteristics of for-profit entities differ from those of governmental entities, some of the findings from prior research of corporate audit delay are used to guide the hypotheses of this study of governmental audit delay. The finding concerning a company's desire to accelerate the reporting of good news and delay the reporting of bad news particularly helps guide some of the hypotheses in this study regarding report message content. Research Question 1 in this study deals with whether the financial report message, as evidenced by key financial statement ratios, is a significant predictor of audit report delay and audit reports

meeting or failing to meet state-mandated filing deadlines. Since this area has not been examined in prior studies of governmental audit delay, it was necessary to look to the findings from corporate audit delay to guide the hypotheses in this study regarding the effect of profitability ratios and financial-position ratios on the timing of the audit. Also, the findings from studies of corporate audit delay regarding the effect of various complexities on the timing of the audit are also considered when developing the hypotheses regarding the audit environment in this study.

### CHAPTER III - METHODOLOGY

This research examines the variables that impact delay in audits of local governments in Mississippi, as well as the variables that differ between local governments that file audits within the state-mandated deadlines versus those governments that fail to do so. The research also examines the variables that impact delay in compilation reports issued by smaller local governments that are not required to complete full-scope audits, as well as the variables that differ between local governments that file compilations within the state-mandated deadlines versus those governments that fail to do so.

This research defines audit/compilation delay (DELAY) as the number of days from fiscal year end (September 30, 2007 for all observations in this study) to the date the audit or compilation report was filed with the Mississippi Office of the State Auditor.<sup>4</sup> This definition of audit delay differs from prior studies of governmental audit delay as discussed in Chapter II in that those studies, with the exception of Dwyer & Wilson (1989) and Mead (2011), measured audit delay as the time between the fiscal year end and the date on the audit report. The filing date, rather than the report date, is used in this study, because it better represents the time in which the reports are publicly available.

This research defines a late audit/compilation (LATE) as one that is submitted to the Office of the State Auditor on a date beyond the state-mandated audit deadline. In this study, audits that are filed late are coded “1”, while on-time audits are coded “0”. Concerning the state-mandated audit deadline, Section 21-35-31 (1) of the Mississippi Code requires all municipalities to have an annual audit or compilation. According to the Code, the procedures shall be

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<sup>4</sup> This variable is log transformed for analysis.

completed and the reports be submitted to the state auditor's office before the close of the next succeeding fiscal year. As such, the audit deadline and, therefore, the cutoff date between a late audit or compilation and a timely audit or compilation is defined in this research as September 30, 2008.

This research utilizes OLS regression to identify the statistically significant variables that can be used to predict governmental audit/compilation delay, and it uses logistic regression to identify the statistically significant variables that differ between entities that file audits or compilations in a timely manner versus those entities that do not file in a timely manner. In this study, report timeliness is modeled on the following factors: 1) Report message content and managerial competency, 2) Accountability, and 3) Audit environment. Specifically, the research addresses the following research questions concerning the effect those factors have on the completion of full-scope audits:

*Report Message Content and Managerial Competency:*

- 1) Is the financial report message, as evidenced by key financial statement ratios, a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
  
- 2) Is the total number of reported audit findings a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

- 3) Is a qualified or adverse audit opinion a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

*Accountability:*

- 4) Is the amount of bonded and other long-term indebtedness a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
- 5) Is the earlier filing deadline required under the Single Audit Act a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

*Audit Environment:*

- 6) Is the number of major funds reported in the government's financial statements a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
- 7) Is the number of miles between the auditor's office and the audit client's office a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

- 8) Is the total number of governmental attestation engagements performed by the audit firm a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

Regarding compilation engagements for smaller governments, the research addresses the following questions:

*Report Message Content and Managerial Competency:*

- 9) Is the total number of reported findings a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

*Accountability:*

- 10) Is the amount of bonded and other long-term indebtedness a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

*Audit Environment:*

- 11) Is the number of funds reported in the government's financial statements a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?



- 12) Is the number of miles between the auditor's office and the compilation client's office a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?
  
- 13) Is the total number of governmental attestation engagements performed by the audit firm a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

### **Hypothesis Development**

The current study proposes that audit/compilation timeliness is a function of three groups of factors, as shown in the following model:

$$\text{Audit/Compilation delay} = f(\text{Report message content and managerial competency, Accountability, Audit environment})$$

Prior studies of governmental audit delay have also considered regulatory constraints. Due to the nature of the sample used in this study (observations from only one state), regulatory constraints will be equal across all observations. Therefore, many of the variables found to be significant in prior studies are controlled for by the use of data from only one state. For example, Johnson (1996), Johnson (1998), Johnson et al. (2002), and Payne & Jenson (2002) all found that governmental entities with a fiscal year-end falling within the researchers' defined "busy season" were associated with increased audit delay. All governmental entities in Mississippi have a September 30 year end, therefore a control variable to capture year-end differences is not included in the regression models for this study.

Johnson et al. (2002) found that a variable fee arrangement based on a per-hour charge was associated with increased audit delay when compared with audit engagements with a fixed fee arrangement. In Mississippi, a variable fee arrangement exists with the total fee not allowed to exceed a contracted fixed amount. Since all observations in the sample for this study are subject to the same type of fee arrangement, a control variable to capture the type of fee arrangement is not included in the regression models for this study.

Payne & Jenson (2002) found that the presence of a state ban on solicitation or competitive bidding for audit engagements ultimately leads to increased audit delay. As no such ban exists in Mississippi, all observations in the sample for this study will be equal for this variable. As such, a control variable to capture differences in state policies regarding solicitation or competitive bidding for audit engagements is not included in the regression models in this study.

Finally, Dwyer & Wilson (1989) and McLelland & Giroux (2000) each found that the presence of state-mandated accounting requirements can impact audit timeliness. Dwyer & Wilson (1989) found that if a state was subject to state regulation of accounting, such as when a state requires an accounting basis other than that required by GAAP, this is associated with increased audit delay. Similarly, McLelland & Giroux (2000) found that the presence of state accounting regulations increased audit report delay. In Mississippi, the accounting requirements, and thus the auditing requirements, depend on the amount of municipal revenues or expenditures.

According to the state's municipal audit guide, Mississippi municipal governments may contract for one of three different types of engagements: (1) Full-scope audit of financial statements prepared in accordance with GAAP, (2) Full-scope audit of financial statements

prepared in accordance with Other Comprehensive Basis of Accounting (OCBOA) (i.e. Cash Basis), or (3) The preparation of a compilation report using OCBOA (Cash Basis) after applying certain agreed-upon procedures.

The criteria to determine the type of attestation engagement is based on total revenues or expenditures, whichever is greater. All municipalities with revenues or expenditures greater than or equal to \$10 million are required to have a full-scope audit of financial statements prepared in accordance with GAAP and report in accordance with GASB Statement No. 34. All municipalities with total revenues or expenditures greater than or equal to \$1 million but less than \$10 million are required to have a full-scope audit of their *Combined Statement of Cash Receipts and Disbursements* and report in accordance with GASB Statement No. 34. Municipalities with revenues or expenditures less than \$1 million may contract for a compilation report in lieu of a full-scope audit of financial statements prepared in accordance with GAAP. Since the single audit package that must be submitted to the Federal Audit Clearinghouse requires audited financial statements, the option for a compilation report is not available if the municipality is required to have a federal single audit.

Since all the observations in this study are subject to the same regulatory constraints, a control variable to capture differences in state regulations is not included in the regression models. However, since each of the report choices will require differing amounts of auditor effort and the auditor's output will differ between the two types of engagements, separate regression models are completed for full-scope audits and for compilation reports/agreed-upon procedures engagements. Due to the small number of Mississippi municipalities having full-scope audits of financial statements that are prepared in accordance with OCBOA, separate regressions are not completed for those engagements. Furthermore, since the characteristics of

those engagements differ from the characteristics of either a full-scope-audit engagement or a compilation engagement, those entities are not included in the regression models in this study.

*Report Message Content and Managerial Competency:*

Dwyer & Wilson (1989) developed hypotheses based on the premise that timely reporting is a device employed by municipalities to signal highly competent financial management.

Administrators and elected officials are expected to signal fiscal competence and stewardship to the citizens, investors, and other users (McLelland & Giroux 2000). One circumstance in which management has incentive to signal competent performance is when there exists a favorable message to be reported. One element of a favorable message is strong financial performance.

Givoly & Palmon (1982) noted that delayed financial reporting is often a precursor to the receipt of bad news. Hirshleifer (1993) suggested that managers' incentives are to advance the arrival of good news and delay the arrival of bad news.

Dwyer & Wilson (1989) proxied strong financial performance with a measure of financial viability (the ratio of the general fund balance to general fund revenues). The ratio of general fund balance to general fund revenues is a widely used indicator of operating fund liquidity (Dwyer & Wilson 1989). In the prior studies of municipal audit timeliness, this is the only ratio that has thus far been examined, and the researchers did not find evidence that it was significantly associated with audit delay. The current study proposes to examine other key governmental financial statement ratios as suggested by Pridgen & Wilder (2011) to be relevant indicators of underlying debt ratings. Those ratios include the following:

(1) Total Net Assets / Total Revenues

(2) Change In Net Assets / Total Net Assets

Equation (1) is a measure of financial position (POSITION). It measures the extent to which cumulative revenues exceed cumulative costs. Equation (2) is a measure of financial performance (PERFORMANCE) that measures how much of the current year's surplus or deficit contributed to the cumulative net assets. These two key financial ratios provide a measure of favorable or unfavorable report content. It is expected that favorable report content (good news) will be reported in a more timely manner. This effect is expected for two reasons. First, management has a signaling incentive to report good news as quickly as possible, as report delay, itself, may be interpreted as a signal of bad news. Also, favorable report content is an indication of competent management. A competent management staff is expected to have stronger internal controls and a more extensive and well-organized record-keeping function. These characteristics will aid the audit process, have a positive impact on the auditor's assessment of risk, and contribute to a more timely audit. In contrast, it is expected that the reporting of unfavorable content (bad news) will be delayed and will also be associated with less competent management. A less competent management staff can be reasonably expected to have weaker internal controls and a less extensive and more unorganized record-keeping function. These characteristics will hinder the audit process, have a negative impact on the auditor's assessment of risk, and contribute to a less timely overall audit. Based on these arguments, the following are hypothesized:

**H1a: A favorable report message, as measured by key financial statement ratios, will be negatively associated with audit report delay.**

**H1b: A favorable report message, as measured by key financial statement ratios, will be associated with audit reports meeting state-mandated filing deadlines.**

Another element of a favorable governmental audit report message is the lack of audit findings. Prior studies of governmental audit timeliness have not addressed audit findings. In a study of differences between private-sector auditors and public-sector (state government) auditors in Mississippi, Cagle & Pridgen (2011) noted that the number of audit findings issued in the audit report is positively associated with audit delay. Audit findings are issued when the auditee fails to comply with laws or regulations and when the auditor notes problems with internal controls. These issues, especially internal control problems, will lead to increased assessment of risk, increased audit procedures, and increased audit time. In contrast, the lack of audit findings, like favorable financial statement ratios, is a measure of good news that is expected to be reported in a more timely manner. Lack of audit findings may also be considered an indication of competent management. In contrast, a large number of audit findings could be perceived as bad news and could be an indication of less competent management, both of which could lead to less timely reporting. In this study, FINDINGS is defined as the total number of findings issued by the auditor on the audit report. The following are hypothesized:

**H2a: The total number of reported audit findings will be positively associated with audit report delay.**

**H2b: A higher number of reported audit findings will be associated with audit reports failing to meet state-mandated filing deadlines.**

Although prior studies (Dwyer & Wilson 1989, Rubin 1992, McLelland & Giroux 2000) have found no significant relationship between the type of audit opinion and audit timeliness, Payne & Jenson (2002) found that unqualified audit opinions were significantly associated with decreased audit time. Also, Laitinen & Laitinen (1998) found a significant association between qualified audit reports and timeliness of filing by commercial entities. Bamber et al. (1993) suggests that qualified opinions are not likely to be issued until after the auditor has spent considerable time and effort pursuing additional audit procedures and other reporting alternatives in an effort to avoid qualification. In this study, the variable OPINION is coded 1 if the government entity received an other-than-unqualified audit opinion, and 0 otherwise. Taking into consideration the findings of Payne & Jenson (2002) and Laitinen & Laitinen (1998) and that suggested by Bamber et al. (1993), the following are hypothesized:

**H3a: An other-than-unqualified audit opinion will be associated with increased audit report delay.**

**H3b: An other-than-unqualified audit opinion will be associated with audit reports failing to meet state-mandated filing deadlines.**

The government's receipt of the GFOA Certificate for Excellence in Financial Reporting, a variable included and found to be significant in most of the prior studies on governmental audit delay, is not included in this study. Evans & Patton (1983) noted that larger cities are more likely to participate in this award program, and Payne & Jenson (2002) noted that, of the states sampled in that study, Mississippi was the least likely to participate in the Certificate program. In the year sampled for this study, only five municipalities in Mississippi (Biloxi, Clinton, Jackson, Meridian, and Ridgeland) received the Certificate. These five cities are retained in the model, but, as a sensitivity check, a separate regression was calculated after removing these cities.

Preparation of a comprehensive annual financial report (CAFR) rather than general-purpose financial statements will also not be considered in this study, as only ten counties and cities in Mississippi prepared a CAFR. Also, a city-manager form of government versus another form of government is not considered in this study, as only six entities (D'Iberville, Gautier, Grenada, Pascagoula, Pearl River, Picayune) in Mississippi were noted as having a city-manager form. As with the cities awarded the Certificate for Excellence, those cities preparing CAFRs and those cities with a city-manager form of government are retained in the model, but, as a sensitivity check, separate regressions were computed after removing these entities.

*Accountability:*

Differing levels of accountability may also influence the timing of the audit report. For example, the presence of debt is expected to increase monitoring of municipal performance (Evans & Patton 1987). Bondholders' primary concerns are the solvency of the municipality and its ability to repay the required debt service (Payne & Jenson 2002). Payne & Jenson (2002)



noted that bondholders would view an unusual delay in financial reporting as a negative sign. As such, management of entities in which bonded and other long-term indebtedness exist will have an incentive to signal favorable performance through timely reporting. Payne & Jenson (2002) found that the presence of bonded indebtedness significantly reduced audit delay. In this study, the DEBT variable is measured as the total dollar amount of long-term debt at fiscal year end. The following are hypothesized:

**H4a: The amount of bonded and other long-term indebtedness will be negatively associated with audit report delay.**

**H4b: A higher amount of bonded and other long-term indebtedness will be associated with audit reports meeting state-mandated filing deadlines.**

Payne & Jenson (2002) also included a variable capturing whether the government reported in accordance with the requirements of the Single Audit Act. Governments expending \$500,000 or greater of Federal assistance in a single year are subject to additional audit procedures under the Single Audit Act. These additional procedures will increase audit time, and additional audit reports will necessarily be generated. The single audit reporting package, which must be submitted to the Federal Audit Clearinghouse, includes not only the audited financial statements, but also a schedule of expenditures of federal awards, the auditor's opinion on the fair presentation of the schedule of federal expenditures of awards, an auditor's report on internal control findings and an opinion on compliance pertaining to major programs, an auditor's schedule of findings and questioned costs, a summary schedule of prior audit findings, a

summary of planned and completed corrective actions regarding those findings, and a data collection form summarizing the results of each audit (Carslaw et al. 2007). Payne & Jenson (2002) found a marginally significant positive association between the existence of a Single Audit and audit delay.

Although Single Audits lead to additional audit requirements and time, entities subject to those requirements are also subject to additional filing deadlines by the Office of Management and Budget (OMB). Specifically, the single audit reporting package must be submitted no later than nine months after the end of the auditee's fiscal year. In this study, the SINGLEAUDIT variable is coded 1 if the government is subject to the requirements of the Single Audit Act, and 0 otherwise. As a result of the additional level of accountability and the Single Audit filing deadline occurring earlier than Mississippi's state-mandated filing deadline, the following are hypothesized:

**H5a: Governmental entities subject to the Single Audit Act will be associated with decreased audit report delay.**

**H5b: Governmental entities subject to the Single Audit Act will be associated with audit reports meeting state-mandated filing deadlines.**

*Audit Environment:*

The various complexities of an audit can lead to potential delays in the timing of the audit report. Payne & Jenson (2002) used as a measure of audit complexity the number of separate funds reported on the government's financial statements. The variable was coded 1 for any

entity that reported three or more separate funds and 0 if otherwise. Approximately 81 percent of the observations in that study reported three or more separate funds, and the findings indicated no significant correlation with audit timing. Since that study, the enactment of GASB Statement No. 34 changed the method of reporting individual funds. Current rules require reporting only “major funds” separately rather than reporting all funds separately. Major funds include the general fund and any other fund in which total assets, liabilities, revenues, or expenditures/expenses of the fund are at least 10 percent of the total of all funds of its category (governmental or enterprise) and at least 5 percent of the total for all governmental and enterprise funds combined. All non-major funds are allowed to be combined and reported in a single column.

In the current study, a variable, FUNDS, is included to capture the number of reported major funds. As a greater number of major funds will require a greater amount of audit effort, the following are hypothesized:

**H6a: The total number of reported major funds will be positively associated with audit delay.**

**H6b: A higher number of reported major funds will be associated with audit reports failing to meet state-mandated filing deadlines.**

The physical distance between the auditor’s office and the auditee’s office is a variable not considered in prior studies. While the distance between the auditor and client is not a direct measure of audit complexity, the mileage the auditors must travel to complete field work can be

reasonably expected to have a bearing on the amount of time required to complete the audit. An auditor situated farther from the audit client will require additional travel time that an auditor situated nearer to the client would not be required to incur. Additionally, auditors may be inclined to procrastinate concerning engagements in which the burden of increased travel is present, especially when there exist other engagements that are closer in proximity. In this study, the DISTANCE variable is defined as the total number of miles between the auditor's office and the auditee's office. The following are hypothesized:

**H7a: The total number of miles between the auditor and the audit client will be positively associated with audit report delay.**

**H7b: A higher number of miles between the auditor and the audit client will be associated with audit reports failing to meet state-mandated filing deadlines.**

An audit of governmental entities differs from an audit of for-profit companies. Generally Accepted Government Auditing Standards (GAGAS), issued by the Government Accountability Office (GAO), apply to financial and performance audits of governmental agencies. As such, a degree of specialization is required to perform governmental audits. In this study, the variable, EXPERTISE, is measured as the total number of governmental audit and compilation clients for each audit firm in the sample. Audit firms that specialize in audits and compilations of governmental entities are expected to be better equipped to perform a timely audit or compilation of a local governmental entity. However, since all governmental engagements in Mississippi are due on the same date, auditors with multiple governmental

clients may experience time constraints as a result of increased workload. As such, no direction is predicted regarding the following hypotheses:

**H8a: The total number of governmental attestation engagements performed by the audit firm will be associated with audit delay.**

**H8b: The total number of governmental attestation engagements performed by the audit firm will be associated with whether audit reports meet state-mandated filing deadlines.**

*Control Variable:*

The data obtained for this study includes audits of both counties and municipalities. Each of the report choices will require differing amounts of auditor effort. County audits are expected to differ from municipal audits in the organization of operations and the degree of audit complexity. Johnson (1998) included a categorical variable for counties and found that counties were significantly associated with longer audit delays when compared with municipalities. It is expected that counties in the sample from this study will have longer audit delays when compared with municipalities, therefore the full-scope-audit regression model will include a control variable (COUNTY) coded 1 if the entity is a county and 0 if otherwise. This variable is used to control for the potential effect of organizational differences on the time to file the audit.

## Compilation Engagements

As previously mentioned, smaller municipalities in Mississippi are allowed to submit a compilation report to the state auditor in lieu of a full-scope audit report. The auditors of those entities are only required to complete certain limited agreed-upon procedures. As such, many of the hypotheses outlined above will not be applicable to those engagements. The compiled financial statements, for example, are limited to a statement of cash receipts and disbursements, therefore key financial ratios based on accrual accounting cannot be extracted from those statements. Also, the auditor expresses no opinion concerning the fair presentation of financial information. Finally, municipalities required to file according to the Single Audit Act must also complete a full-scope audit. Based on the discussions from this chapter, the following are hypothesized with respect to these limited-scope engagements:

**H9a: The total number of reported findings will be positively associated with compilation report delay.**

**H9b: A higher number of reported findings will be associated with compilation reports failing to meet state-mandated filing deadlines.**

**H10a: The amount of bonded and other long-term indebtedness will be negatively associated with compilation report delay.**

**H10b: A higher amount of bonded and other long-term indebtedness will be associated with compilation reports meeting state-mandated filing deadlines.**

**H11a: The total number of reported funds will be positively associated with compilation report delay.**

**H11b: A higher number of reported funds will be associated with compilation reports failing to meet state-mandated filing deadlines.**

**H12a: The total number of miles between the auditor and the compilation client will be positively associated with compilation report delay.**

**H12b: A higher number of miles between the auditor and the compilation client will be associated with compilation reports failing to meet state-mandated filing deadlines.**

**H13a: The total number of governmental attestation engagements performed by the audit firm will be associated with compilation report delay.**

**H13b: The total number of governmental attestation engagements performed by the audit firm will be associated with whether compilation reports meet state-mandated filing deadlines.**

### **Empirical Models**

Ordinary-least-squares (OLS) regression and logistic regression is used to test hypotheses in this study. The dependent variable, DELAY, is used to test the set of hypotheses dealing with report delay (the A-set of hypotheses). That variable is defined as the number of days from the entity's fiscal year end (September 30, 2007) to the date the audit or compilation report was received by the Mississippi Office of the State Auditor, and is log transformed for analysis, as visual inspection of the residual distribution using untransformed data revealed a violation of the

normality assumption. The following OLS regression model is used for tests of full-scope audit engagements:

$$DELAY = f (POSITION, PERFORMANCE, FINDINGS, OPINION, DEBT, SINGLEAUDIT, FUNDS, DISTANCE, EXPERTISE, COUNTY)$$

The majority of the data used in the study was obtained from the audited and compiled financial reports of each county and municipality. The variable names, expected impact on audit delay, and variable descriptions have been previously discussed. Table 3 presents a summary of the variables along with sources of data.

The dependent variable, LATE, was used to test those hypotheses dealing with whether the governmental entity met or failed to meet the reporting deadlines (the B-set of hypotheses). That variable is coded 1 if the audit is filed beyond the state-mandated filing deadline and 0 if the audit is filed on or before the state-mandated filing deadline. The following logistic regression is used for full-scope audit engagements:

$$LATE = f (POSITION, PERFORMANCE, FINDINGS, OPINION, DEBT, SINGLEAUDIT, FUNDS, DISTANCE, EXPERTISE, COUNTY)$$

Many of the local governments in Mississippi are not required to have a full-scope audit and instead contract for a compilation report subject to certain agreed-upon procedures to be performed by the auditor. These procedures typically involve a reconciliation of cash on deposit with banks to balances in the general ledger accounts, confirmation of cash balances from the banks, verification of taxes on real and personal property levied during the year, verification of a sample of purchases made by the municipality during the year, and verification of the deposit of



**Table 3: Description of Variables**

<b>Variable (Expected Sign)</b>	<b>Description</b>	<b>Source</b>
<b>Dependent Variables:</b>		
DELAY	Number of days from fiscal year end to the date the audit report is received by the state auditor's office	Audited Financial Statements
LATE	=1 if the entity failed to meet the state-mandated reporting deadline, 0 otherwise	Audited Financial Statements
<b>Report Message Content and Managerial Competency:</b>		
POSITION (-)	Total Net Assets/Total Revenues	Audited Financial Statements
PERFORMANCE (-)	Change in Net Assets/Total Net Assets	Audited Financial Statements
FINDINGS (+)	Total number of audit findings issued by the auditor	Audited Financial Statements
OPINION (+)	=1 if entity received other than unqualified audit opinion, 0 otherwise	Audited Financial Statements
<b>Accountability:</b>		
DEBT (-)	Government's total long-term debt	Audited Financial Statements
SINGLEAUDIT (-)	=1 if the entity is subject to the requirements of a Single Audit, 0 otherwise	Audited Financial Statements
<b>Audit Environment:</b>		
FUNDS (+)	Number of major funds reported on the entity's financial statements	Audited Financial Statements
DISTANCE (+)	Number of miles between auditor's office and the audit client's office	mapquest.com
EXPERTISE (±)	Total number of governmental attestation engagements performed by the audit firm during the year	Compiled from Audited Financial Statements
<b>Control Variable:</b>		
COUNTY (±)	=1 if audited entity is a county, 0 otherwise	Audited Financial Statements

payments made by the state to the municipality during the year. These engagements are subject to the same due date as are full-scope audits.

Since the procedures outlined above do not constitute an audit, many of the variables captured in the regression model for full-scope audits do not exist for these compilation engagements. However, to gain a better understanding of the timing of these engagements, the following models were examined (See Table 3 for variable descriptions):

$$DELAY = f (FINDINGS, DEBT, FUNDS, DISTANCE, EXPERTISE)$$

$$LATE = f (FINDINGS, DEBT, FUNDS, DISTANCE, EXPERTISE)$$

## CHAPTER IV – RESULTS

This research examines audit delay and compilation delay in local governments in Mississippi. It utilizes ordinary least squares (OLS) regression to test whether certain independent variables have an effect on the length of time between the fiscal year-end and the date in which the final audited or compiled report is submitted to the Office of the State Auditor. The research also utilizes logistic regression to test whether certain independent variables are associated with whether audited or compiled financial statements are submitted to the Office of the State Auditor within the state-mandated timeframe of one year.

Independent variables examined in this study are grouped into three categories: (1) Report Content and Managerial Competency, (2) Accountability, and (3) Audit Environment. This chapter discusses the findings concerning the following research questions concerning governmental entities required to obtain a full-scope audit of its financial statements:

### *Report Message Content and Managerial Competency:*

- 1) Is the financial report message, as evidenced by key financial statement ratios, a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
  
- 2) Is the total number of reported audit findings a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

- 3) Is a qualified or adverse audit opinion a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

*Accountability:*

- 4) Is the amount of bonded and other long-term indebtedness a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
- 5) Is the earlier filing deadline required under the Single Audit Act a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

*Audit Environment:*

- 6) Is the number of major funds reported in the government's financial statements a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
- 7) Is the number of miles between the auditor's office and the audit client's office a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?
- 8) Is the total number of governmental attestation engagements performed by the audit firm a significant predictor of (a) audit report delay and (b) audit reports meeting or failing to meet state-mandated filing deadlines?

Regarding smaller governments that are allowed to complete a compilation engagement, this chapter discusses the findings concerning the following research questions:

*Report Message Content and Managerial Competency:*

- 9) Is the total number of reported findings a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

*Accountability:*

- 10) Is the amount of bonded and other long-term indebtedness a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

*Audit Environment:*

- 11) Is the number of funds reported in the government's financial statements a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?
- 12) Is the number of miles between the auditor's office and the compilation client's office a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

- 13) Is the total number of governmental attestation engagements performed by the audit firm a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

### **The Sample**

The data used to examine governmental audit and compilation delay were obtained from the audited and compiled financial statements of Mississippi governments for the fiscal year ending September 30, 2007. Fiscal-year 2007 was chosen to ensure that the governments taking the longest to file audited or compiled financial statements would be included in the sample. The final sample included entities filing as late as December 22, 2010.

A listing of Mississippi counties and municipalities was obtained which contained an initial sample of 82 observations and 298 observations, respectively. Financial statements were obtained for each municipality and county either from the website of the Mississippi Office of the State Auditor or directly from that office when financial statements were not present on the website. For Mississippi counties, the final sample included 55 observations, as one was removed from the sample since a final audit had not yet been completed for fiscal year 2007, and 26 were removed from the sample since these audits were completed by the Mississippi Office of the State Auditor rather than by a private accounting firm.

For the 298 Mississippi municipalities, 22 of the entities were removed from the final sample because audited or compiled financial statements were not available as of the date of data collection. Another 30 municipalities were not included in the final sample because the audited financial statements of those entities were prepared using an other comprehensive basis of accounting rather than GAAP and, therefore, lacked comparability on some of the variables,

particularly the financial statement ratio variables. One municipality was removed from the sample because of outlying data.<sup>5</sup> This resulted in a final sample that included 111 municipalities submitting audited financial statements and 134 municipalities submitting compiled financial statements.

### **Descriptive Information—Full-Scope Audit Engagements**

Table 4 presents descriptive statistics for full-scope audits filed on or before the state-mandated deadline and full-scope audits filed after the state-mandated deadline. Along with statistics for all 166 governmental entities in the sample (55 counties and 111 municipalities), the table presents statistics for 98 governmental entities that filed late audits and 68 governmental entities that filed timely audits. Preliminary univariate analysis of each independent variable was performed. Differences for continuous variables were analyzed using t-tests while differences for dichotomous variables were analyzed using chi-squared tests. One-tailed test results are presented for variables in which directional predictions were made, while two-tailed test results are presented for variables in which no directional prediction was made. Results of those tests are also presented in Table 4

The mean audit delay (DELAY) for all entities in the sample was 399.66 days. For audits filed in a timely manner, the mean delay was 248.57 days. For audits filed past the filing deadline, the mean audit delay was 504.50 days. Results of the t-tests and chi-squared tests reveal several independent variables that differ significantly between timely filers and late filers, mainly in the area of report message content and managerial competency. Specifically, the timely filers and late filers differ on FINDINGS, OPINION, DISTANCE, and the control

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<sup>5</sup>Additional analysis and discussion of this outlying observation is included later in this chapter.

<b>Table 4: Descriptive Statistics for Governments Completing Full-scope Audits and a Comparison of Late and Timely Audits</b>			
<b>Variables<sup>a</sup></b>	<b>Total (n=166)</b>	<b>Late Audits (n=98)</b>	<b>Timely Audits (N=68)</b>
<b><i>Dependent Variable: DELAY</i></b>			
Mean (Standard Deviation)	399.66 (172.49)	504.50 (142.48)	248.57 (68.06)
Range	87 to 1046	367 to 1046	87 to 365
<b><i>Report Message Content and Managerial Competency:</i></b>			
<b>POSITION</b>			
Mean (Standard Deviation)	2.12 (1.41)	2.07 (1.60)	2.18 (1.10)
Range	0.19 to 7.09	0.19 to 7.09	0.21 to 6.21
<b>PERFORMANCE</b>			
Mean (Standard Deviation)	5.11 (11.44)	4.81 (13.26)	5.53 (8.21)
Range	-70 to 38	-70 to 38	-18 to 34
<b>FINDINGS</b>			
Mean (Standard Deviation)	4.11 (5.18)	5.33*** (5.74)	2.37*** (3.62)
Range	0 to 34	0 to 34	0 to 16
<b>OPINION</b> (frequency)	21.08%	28.57%***	10.29%***
<b><i>Accountability:</i></b>			
<b>DEBT</b> (millions)			
Mean (Standard Deviation)	\$17.66 (\$35.82)	\$14.22 (\$22.41)	\$22.61 (\$48.90)
Range	\$0 to \$352.04	\$20.8 to \$129.2	\$0 to \$352.0
<b>SINGLEAUDIT</b> (frequency)	51.20%	55.10%	45.59%
<b><i>Audit Environment:</i></b>			
<b>FUNDS</b>			
Mean (Standard Deviation)	3.63 (1.49)	3.59 (1.45)	3.69 (1.55)
Range	1 to 8	1 to 8	2 to 8
<b>DISTANCE</b>			
Mean (Standard Deviation)	37.77 (45.75)	45.08** (48.74)	27.22** (39.04)
Range	1 to 238	1 to 170	1 to 238
<b>EXPERTISE</b>			
Mean (Standard Deviation)	6.78 (6.61)	7.16 (7.06)	6.22 (5.90)
Range	1 to 24	1 to 24	1 to 24
<b><i>Control Variable:</i></b>			
<b>COUNTY</b> (frequency)	33.13%	46.94%***	13.24%***

<sup>a</sup> See Table 3 for a description of the variables

\*\*\*p<0.001 one-tailed test

\*\*p<0.01 one-tailed test

Note: For comparisons of governments filing late audits and governments filing timely audits, t-tests were used to determine significant differences for continuous variables, and chi-squared tests were used to determine significant differences for dichotomous variables



variable COUNTY. Each of these significant variables, along with the other independent variables in the models are discussed in detail below.

The mean financial statement position (POSITION) (measured by the ratio of total net assets to total revenues) for all governments in the sample was 2.12. The mean financial statement position associated with audits filed in a timely manner was 2.18, while the mean financial statement position associated audits filed after the deadline was 2.07. The mean performance ratio (PERFORMANCE) (measured by the ratio of the change in net assets to total net assets) for all entities was 5.11. The mean performance ratio associated with audits filed in a timely manner was 5.53. The mean performance ratio associated with audits filed after the deadline was 4.81.

The mean total number of audit findings for all governmental entities in the sample was 4.11. The mean total number of audit findings (FINDINGS) issued for entities in the sample that filed in a timely manner was 2.37, while the mean total number of audit findings issued for entities that failed to file in a timely manner was 5.33. The t-tests revealed this to be a significant difference ( $p < 0.001$ , one-tailed). Concerning the opinion rendered by the auditor on the fair presentation of financial statements in accordance with GAAP (OPINION), 21.08 percent of the governmental entities received an other-than-unqualified audit opinion. Of those entities that filed audits in a timely manner, 10.29 percent of the entities received an other-than-unqualified audit opinion. Of those entities that failed to file financial statement audits in a timely manner, 28.57 percent received an other-than-unqualified audit opinion. A chi-squared test indicates that this is a significant difference between timely and late filers ( $p < 0.001$ , one-tailed).

A review of issues of accountability indicates that the mean dollar amount of long-term debt (DEBT) for all entities in the sample was \$17,660,000. The mean dollar amount of long-term debt for entities in the sample that filed in a timely manner was \$22,610,000, while the mean dollar amount of long-term debt for entities failing to meet the filing deadline was \$14,220,000. For all entities in the sample, 51.20 percent were subject to the requirements of the Single Audit Act (SINGLEAUDIT). Of those entities meeting the filing deadline, 45.59 percent were subject to the requirements of the Single Audit Act, and for entities failing to meet the filing deadline, 55.10 percent were subject to the requirements of the Single Audit Act.

A review of the variables measuring the audit environment indicates that the mean number of major funds (FUNDS) reported by all entities was 3.63. The mean number of major funds for entities filing in a timely manner was 3.69. The mean number of major funds reported by entities failing to meet the state-mandated deadline was 3.59. The average mileage (DISTANCE) between the auditor's office and the audit client's office was 37.77 miles—27.22 miles for entities that filed in a timely manner and 45.08 miles for entities failing to meet the filing deadline. The t-test reveals DISTANCE to be significantly different between timely and late filers ( $p < 0.01$ , one-tailed). For auditors captured in the sample, the mean number of governmental audit and attestation clients (EXPERTISE) was 6.78—6.22 for those auditors associated with audits that were filed in a timely manner and 7.16 for those auditors associated with audits that were filed past the state-mandated deadline.

The control variable COUNTY was also significantly different between timely and late filers ( $p < 0.001$ , one-tailed). Counties made up 33.13 percent of the total sample. In the group of timely filers, counties made up 13.24 percent of the sample, while in the group of late filers, counties made up 46.94 percent of the sample.

Further analysis of the characteristics of municipalities versus counties is presented in Table 5. The table presents statistics for 111 municipalities, 55 counties, which were, for fiscal-year 2007, subject to a full-scope audit of their financial statements prepared in accordance with GAAP. For ease of interpretation, statistics for all municipalities and counties combined are again presented in Table 5. Univariate analysis of the independent variables was conducted for the purpose of determining what differences exist between municipalities and counties.

Differences between the groups were analyzed using t-tests for continuous variables and chi-squared tests for categorical variables. The results of these tests are also presented in Table 5.

The mean total delay (DELAY) for all governmental entities in the sample was 399.66 days. The mean total delay for the municipalities in the sample was 355.41 days. For the counties, the mean total delay was 488.98 days. If audit delay was measured as the number of days between fiscal year end and the date on the audit report, as it has been measured in prior studies, the mean delay for all governmental entities in the sample would be 312.23 days (267.32 days for municipalities; 402.89 days for counties). These audit delays for municipalities and counties are much greater than the delays observed in prior literature (see Table 1). In the overall sample of municipalities and counties, 59.04 percent of those entities failed to submit audited financial statements to the Mississippi Office of the State Auditor within the state-mandated one-year deadline (LATE). For municipalities, 46.85 percent of the audited financial statements were filed after the one-year deadline. For counties, 83.64 percent were filed after the one-year deadline. Results of the t-tests and chi-squared tests reveal that counties differ significantly from municipalities on several of the independent variables, mainly in the area of audit environment. Specifically, the municipalities and counties differ on FINDINGS,

<b>Table 5: Descriptive Statistics for Governments Completing Full-Scope-Audits and a Comparison of Cities and Counties</b>			
<b>Variables<sup>a</sup></b>	<b>Total (n=166)</b>	<b>Cities (n=111)</b>	<b>Counties (n=55)</b>
<b><i>Dependent Variables:</i></b>			
<b>DELAY</b>			
Mean (Standard Deviation)	399.66 (172.49)	355.41 (171.91)	488.98 (136.23)
Range	87 to 1046	87 to 1046	250 to 799
<b>LATE</b> (frequency)	59.04%	46.85%	83.64%
<b><i>Report Message Content and Managerial Competency:</i></b>			
<b>POSITION</b>			
Mean (Standard Deviation)	2.12 (1.41)	2.04 (1.23)	2.26 (1.73)
Range	0.19 to 7.09	0.19 to 6.34	0.25 to 7.09
<b>PERFORMANCE</b>			
Mean (Standard Deviation)	5.11 (11.44)	6.04 (10.10)	3.21 (13.67)
Range	-70 to 38	-42 to 36	-70 to 38
<b>FINDINGS</b>			
Mean (Standard Deviation)	4.11 (5.18)	2.89*** (3.92)	6.58*** (6.43)
Range	0 to 34	0 to 21	0 to 34
<b>OPINION</b> (frequency)	21.08%	21.62%	20.00%
<b><i>Accountability:</i></b>			
<b>DEBT</b> (millions)			
Mean (Standard Deviation)	\$17.66 (\$35.82)	\$17.97 (\$40.51)	\$17.03 (\$24.03)
Range	\$0 to \$352.0	\$0 to \$352.0	\$0.6 to \$125.8
<b>SINGLEAUDIT</b> (frequency)	51.20%	45.05%*	63.64%*
<b><i>Audit Environment:</i></b>			
<b>FUNDS</b>			
Mean (Standard Deviation)	3.63 (1.49)	3.81* (1.52)	3.27* (1.37)
Range	1 to 8	2 to 8	1 to 8
<b>DISTANCE</b>			
Mean (Standard Deviation)	37.77 (45.75)	30.55** (39.82)	52.33** (53.33)
Range	1 to 238	1 to 170	1 to 238
<b>EXPERTISE</b>			
Mean (Standard Deviation)	6.78 (6.61)	6.45 (6.23)	7.44 (7.32)
Range	1 to 24	1 to 24	1 to 24

<sup>a</sup> See Table 3 for a description of the variables

\*\*\*p<0.001 two-tailed test

\*\*p<0.01 two-tailed test

\*p<0.05 two-tailed test

Note: For comparisons of city and county governments, t-tests were used to determine significant differences for continuous variables, and chi-squared tests were used to determine significant differences for dichotomous variables

SINGLEAUDIT, FUNDS, and DISTANCE. Each of these significant variables, along with the other independent variables, are discussed in detail below.

The mean financial statement position (POSITION) (measured by the ratio of total net assets to total revenues) was 2.04 for municipalities and 2.26 for counties. The mean performance ratio (PERFORMANCE) (measured by the ratio of the change in net assets to total net assets) was 6.04 for municipalities and 3.21 for counties. These differences were not significant.

The mean total number of audit findings (FINDINGS) issued for entities in the sample was 2.89 for municipalities and 6.58 for counties. As previously mentioned, a univariate analysis revealed this to be a significant difference ( $p < 0.001$ , two-tailed). Concerning the opinion rendered by the auditor on the fair presentation of financial statements in accordance with GAAP (OPINION), 21.62 percent of the municipalities in the sample received an other-than-unqualified audit opinion, while 20.00 percent of the counties in the sample received an other-than-unqualified audit opinion.

A review of issues of accountability indicates that the mean dollar amount of long-term debt (DEBT) for entities in the sample was \$17,970,000 for municipalities and \$17,030,000 for counties. Approximately 45 percent of the sampled municipalities were subject to the requirements of the Single Audit Act (SINGLEAUDIT), while 63.64 percent of the sampled counties were subject to the Act. Univariate analysis indicated that SINGLEAUDIT was significantly different between municipalities and counties ( $p < 0.05$ , two-tailed).

A review of the variables measuring the audit environment indicates that the mean number of major funds (FUNDS) reported by municipalities in the sample was 3.81, while the mean number of major funds for counties was 3.27. The average mileage (DISTANCE) between

the auditor's office and the audit client's office was 30.55 miles for cities and 52.33 miles for counties. Univariate analyses revealed both FUNDS ( $p < 0.05$ , two-tailed) and DISTANCE ( $p < 0.01$ , two tailed) to be significantly different between municipalities and counties. For auditors captured in the sample, the mean number of governmental audit and attestation clients was 6.45 for auditors associated with municipal audits and 7.44 for auditors associated with county audits.

The bivariate correlation coefficients among the independent variables included in the model appear in Table 6. The COUNTY variable is positively correlated with FINDINGS (0.337), SINGLEAUDIT (0.175), and DISTANCE (0.225), and it is negatively correlated with FUNDS (-0.171). The OPINION variable (coded 1 when the entity received an other-than-unqualified opinion) is negatively correlated with PERFORMANCE (-0.178), and it is positively correlated with FINDINGS (0.295). DEBT is positively correlated with FUNDS (0.315) and SINGLEAUDIT (0.228), while FUNDS is also positively correlated with SINGLEAUDIT (0.230). The DISTANCE variable is positively correlated with OPINION (0.157) and negatively correlated with FUNDS (-0.158).

To assess the presence of multicollinearity, variance inflation factors (VIF) and the condition indexes were examined. No values of VIF were greater than 1.50. The largest condition index (the condition number) was 13.0. Each of these diagnostic measures provides evidence that no strong multicollinearity issues are present in the model.

**Table 6: Bivariate Correlation Coefficients among Variables; Full-scope Audit**

Engagements

n=166

Variables <sup>a</sup>	DELAY	LATE	POSITION	PERFORMANCE	FINDINGS	OPINION	DEBT	SINGLE-AUDIT	FUNDS	DISTANCE	EXPERTISE	COUNTY
DELAY	1.000											
LATE	.732**	1.000										
POSITION	-0.061	-0.035	1.000									
PERFORMANCE	0.037	-0.031	-0.170	1.000								
FINDINGS	.421**	.282**	-0.069	-0.072	1.000							
OPINION	.299**	.220**	-0.048	-0.178*	0.295**	1.000						
DEBT	-0.080	-0.116	-0.102	0.004	0.063	-0.095	1.000					
SINGLE-AUDIT	0.034	0.094	0.051	0.044	0.012	-0.086	0.228**	1.000				
FUNDS	-0.038	-0.033	-0.049	0.058	0.040	-0.081	0.315**	0.230**	1.000			
DISTANCE	0.108	.193*	-0.037	-0.048	0.014	0.157*	-0.107	0.039	-0.158*	1.000		
EXPERTISE	-0.009	0.070	-0.068	-0.021	0.069	0.022	-0.027	-0.099	-0.071	0.069	1.000	
COUNTY	.366**	.352**	0.074	-0.117	0.337**	-0.019	-0.012	0.175*	-0.171*	0.225**	0.070	1.000

<sup>a</sup> See Table 3 for a description of the variables

Pearson Correlations

For the Y/N variables, the Pearson's r is technically a point-biserial correlation coefficient since the variable is a dichotomy

\*\* Correlation is significant at 0.01 level (two-tailed)

\* Correlation is significant at 0.05 level (two-tailed)

## Results—Full-Scope Audit Engagements

In the first phase of testing, an OLS model<sup>6</sup> was estimated using as the dependent variable the natural log of the number of days from fiscal year end until the date the audit report was received by the Office of the State Auditor (DELAY). Leverage values were examined and indicated one influential data point, which was removed from the model.<sup>7</sup> An examination of plots of the residuals indicated no problems with heteroskedasticity. Table 7 presents the results of the regression. The model's adjusted R<sup>2</sup> (26.48%) and model F-statistic (6.943, p<0.001) compare favorably with prior research of governmental audit delay—Dwyer & Wilson (1989): 12%, Johnson (1996): 17%; Johnson (1998): 21.4%; McLelland & Giroux (2000): 31%; Johnson et al. (2002): 21.6%; Payne & Jenson (2002): 13.1%.

In the second phase of testing, a logistic regression analysis<sup>8</sup> was used to determine how the variables examined in the first phase of the study affected the outcome of whether the audited financial statements were filed within or beyond the state-mandated filing deadline. The dependent variable in the regression (LATE) was coded 0 if the audit was filed in a timely manner and 1 if the audit was filed beyond the state-mandated one-year filing deadline.

Table 8 presents the results of the logistic regression. The coefficients indicate that the overall model was significant ( $\chi^2 = 43.30$ ,  $p < 0.001$ ), and the Hosmer and Lemeshow test indicates goodness of fit ( $\chi^2 = 6.72$ ,  $p = 0.567$ ). The model was able to correctly classify 69

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<sup>6</sup> The sample includes clustered data resulting from some governmental entities in the sample being audited by the same audit firm. Ignoring this results in the regression coefficients remaining unbiased (given that the assumptions of OLS are met), however, standard errors are generally underestimated, which inflates the likelihood of Type I error. To counter this, models were estimated using generalized estimating equations (GEE) methods that allow for within-cluster correlation of errors; thus producing clustered robust standard errors. Using this approach, the point estimates are the same as in OLS regression, but the standard errors are different (Ghisletta & Spini, 2004). The OLS and GEE models resulted in the same findings regarding significance.

<sup>7</sup> The results of the regression with the influential data point included are presented and discussed later in this chapter.

<sup>8</sup> A GEE model with a robust estimator was computed and resulted in the same findings regarding significance.



**Table 7: Results of Ordinary Least Squares Regression of Delay for Full-scope Audit Engagements**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.613	0.115	42.424	<0.001
<i>Report Message Content and Managerial Competency:</i>					
POSITION	-	-0.013	0.022	-0.579	0.282
PERFORMANCE	-	0.379	0.273	1.390	0.917
<b>FINDINGS</b>	+	<b>0.021</b>	<b>0.007</b>	<b>3.088</b>	<b>0.001</b>
<b>OPINION</b>	+	<b>0.245</b>	<b>0.081</b>	<b>3.033</b>	<b>0.002</b>
<i>Accountability:</i>					
DEBT (millions)	-	-0.001	0.001	-1.226	0.111
SINGLEAUDIT	-	0.029	0.065	0.455	0.676
<i>Audit Environment:</i>					
FUNDS	+	0.013	0.022	0.586	0.280
DISTANCE (hundreds)	+	0.005	0.069	0.068	0.473
EXPERTISE	±	0.000	0.005	0.062	0.951
<i>Control Variables:</i>					
<b>COUNTY</b>	+	<b>0.326</b>	<b>0.074</b>	<b>4.406</b>	<b>&lt;0.001</b>

<sup>a</sup> See Table 3 for a description of the variables

N	166
Model F-statistic	6.943
Prob (F-statistic)	<0.001
R <sup>2</sup>	0.309
Adjusted R <sup>2</sup>	0.265

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

**Table 8: Logistic Regression Results Showing Factors Contributing to Late Filings of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		1.938	0.977	3.938	0.047	6.947
<i>Report Message Content and Managerial Competency:</i>						
POSITION	-	-0.118	0.134	0.774	0.190	0.889
PERFORMANCE	-	1.240	1.904	0.424	0.743	3.457
<b>FINDINGS</b>	+	<b>0.104</b>	<b>0.055</b>	<b>3.554</b>	<b>0.030</b>	<b>1.109</b>
<b>OPINION</b>	+	<b>1.136</b>	<b>0.528</b>	<b>4.625</b>	<b>0.016</b>	<b>0.321</b>
<i>Accountability:</i>						
<b>DEBT (millions)</b>	-	<b>-0.011</b>	<b>0.007</b>	<b>2.333</b>	<b>0.064</b>	<b>0.989</b>
SINGLEAUDIT	-	0.320	0.395	0.656	0.791	0.726
<i>Audit Environment:</i>						
FUNDS	+	0.115	0.136	0.721	0.198	1.122
<b>DISTANCE (hundreds)</b>	+	<b>0.594</b>	<b>0.453</b>	<b>1.721</b>	<b>0.095</b>	<b>1.811</b>
EXPERTISE	±	0.009	0.030	0.097	0.755	1.009
<i>Control Variables:</i>						
<b>COUNTY</b>	+	<b>1.610</b>	<b>0.482</b>	<b>11.149</b>	<b>0.001</b>	<b>0.200</b>

<sup>a</sup> See Table 3 for a description of the variables

n	166
$\chi^2$	43.300, p<0.001
Cox & Snell R <sup>2</sup>	0.230
Nagelkerke R <sup>2</sup>	0.310
McFadden's R <sup>2</sup>	0.193

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

percent of government entities that filed audits in a timely manner and 74 percent of those that filed late, for an overall success rate of 72 percent. The model had a Cox & Snell  $R^2$  of 0.230, a Nagelkerke  $R^2$  of 0.310, and a McFadden's  $R^2$  of 0.193. The following sections discuss the results of the OLS regression and the logistic regression based on hypothesis grouping.

#### *Report Message Content and Managerial Competency—Financial Statement Ratios*

Hypothesis 1a predicts that a favorable report message, as measured by key financial statement ratios, will be negatively associated with audit report delay. Prior research has seldom included financial statement ratios in their analyses. The exception is Dwyer & Wilson (1989), which included the ratio of general fund balance to general fund revenues as a measure of financial viability. In that study, the ratio was found to have no significance with respect to total audit report delay.

For this study, two ratios were included in the model. POSITION was defined as Total Net Assets / Total Revenue, and it measures the extent to which cumulative revenues exceed cumulative costs. PERFORMANCE was defined as Change In Net Assets / Total Net Assets, and it measures how much of the current year's surplus or deficit contributed to the cumulative net assets. A high POSITION or PERFORMANCE ratio would provide a measure of favorable report content, while a lower POSITION or PERFORMANCE ratio would provide a measure less favorable report content. The hypothesis was based on the premise that good news is reported more quickly than is bad news and that favorable financial statement ratios are an indication of higher quality management.

The coefficient for POSITION was in the predicted direction but was not significant (Table 7), suggesting that financial statement position has no major effect on external audit report timing. The coefficient for PERFORMANCE was in the opposite direction predicted.

There is no evidence that the good or bad news associated with financial-statement content has any significant bearing on the timing of the audit report. Hypothesis 1a is not supported by the results of the regression.

Hypothesis 1b predicts that a favorable report message, as measured by the key financial statement ratios POSITION and PERFORMANCE, would be associated with audit reports meeting state-mandated filing deadlines. Similar to the results from Hypothesis 1a, the coefficient for POSITION was in the predicted direction but was not significant, while the coefficient for PERFORMANCE was in the opposite direction predicted (Table 8). There is no evidence that good or bad news associated with financial-statement content has any bearing on the incidence of late filing of audit reports. Hypothesis 1b is not supported.

#### *Report Message Content and Managerial Competency—Audit Findings*

Hypothesis 2a predicts that the total number of findings reported by the auditor will be associated with longer audit delay. In prior studies of municipal audit delay, the effect of this variable has not been examined. In their study of the timing of school-district audits, Carslaw et al. (2007) included an indicator variable for whether the auditor cited a reportable condition and an indicator variable for whether the auditor identified a material noncompliance in internal control over financial reporting. In that study, both variables were found to be significantly associated with longer delay in filing audit reports.

In this study, the variable, FINDINGS, was defined as the total number of findings issued by the auditor in the report, whether those findings are classified as material weaknesses, significant deficiencies not considered to be material weaknesses, or findings of noncompliance

with laws and regulations. FINDINGS was positive and significant with respect to audit report delay ( $p=0.001$ , one-tailed) (Table 7), thus providing support for Hypothesis 2a.

Hypothesis 2b predicts that a higher number of reported audit findings will be associated with audit reports failing to meet state-mandated filing deadlines. The results of the logistic regression analysis provides evidence that the number of audit findings is significantly associated with audit reports that are not filed in a timely manner ( $p=0.03$ , one-tailed) (Table 8). For each one-unit increase in the number of audit findings, the odds of a late audit increase by 1.109. Hypothesis 2b is supported.

#### *Report Message Content and Managerial Competency—Audit Opinion*

Hypothesis 3a predicts that the opinion rendered by the auditor will have an effect on audit delay, specifically that an other-than-unqualified audit opinion will be associated with longer audit delays. The results of prior studies' examination of audit opinion have been mixed. Dwyer & Wilson (1989), Rubin (1992), and McClelland & Giroux (2000) did not find a significant association with the type of audit opinion and audit delay. Payne & Jenson (2002), however, found that municipalities with a qualified audit opinion experienced increased audit delay. Also, Carslaw et al. (2007), in their study of delay in school district audits, found that an unqualified audit opinion was significantly associated with decreased time in four of the five years studied.

In this study OPINION was coded 1 if the entity received an other-than-unqualified audit opinion (i.e. an adverse or qualified opinion) and 0 if the entity received an unqualified audit opinion. The results of the OLS regression indicate that OPINION is significantly associated

with increased audit delay ( $p=0.002$ , one-tailed) (Table 7). H3a is supported. This finding is consistent with the finding of Payne & Jenson (2002).

Hypothesis 3b predicts that an other-than-unqualified audit opinion will be associated with audits that are filed with the state beyond the mandated filing deadline. Results of the logistic regression provide evidence that OPINION is significantly associated with audits that are filed late ( $p=0.016$ , one-tailed) (Table 8). Hypothesis 3b is supported.

Further analysis regarding whether an adverse audit opinion or a qualified audit opinion affects audit report delay differently is not possible with the data from this study. Of the 166 observations in the study, only three received an adverse audit opinion. One of those entities filed a timely audit (total audit delay of 305 days), while two of those entities filed audits with the state beyond the filing deadline (total audit delays of 382 days and 542 days).

#### *Accountability—Long-Term Debt*

Hypothesis 4a predicts that the amount of bonded or other long-term indebtedness will lead to decreased audit delay. Prior studies of governmental audit delay have approached this area in different ways. Rubin (1992) included a variable for debt-per-capita but found no significance with regard to audit delay. McLelland & Giroux (2000) included a variable for the bond rating of the entity and also found no significance regarding audit delay. Payne & Jenson (2002) included an indicator variable for whether the government had outstanding bonded debt and found that the presence of such debt significantly decreased audit report delay.

In this study, the total amount of bonded and other long-term indebtedness was included as a variable with the reasoning that any long-term indebtedness, not just bonded indebtedness, should impact the government's need to satisfy creditors by issuing timely financial reports.

DEBT was not found to be significantly associated with decreased audit report delay (Table 7). Hypothesis 4a is not supported.

Hypothesis 4b predicts that a higher amount of long-term debt will be associated with governments that file timely financial reports with the state. Results of the logistic regression provide some evidence that DEBT is associated with timely financial statements ( $p=0.064$ , one-tailed) (Table 8). This has important implications in that it appears that either the auditor or the governmental entity are making a conscious effort to complete certain audits (i.e. ones in which the governmental entities have added accountability to creditors) in a timely manner.

#### *Accountability—Single Audit*

Hypothesis 5a predicts that governments required to report according to the requirements of the Single Audit Act will be associated with decreased audit delay due to the earlier filing deadline for such audits. Payne & Jenson (2002) included an indicator variable for the presence of Single Audit requirements and found that the Single Audit was associated with increased audit delay at the  $p=0.10$  significance level.

In this study, SINGLEAUDIT was coded 1 if the government was subject to the Single Audit requirements and 0 otherwise. SINGLEAUDIT was not found to be significantly associated with decreased audit report delay (Table 7). In fact, the coefficient for SINGLEAUDIT was not in the predicted direction. Hypothesis 5a is not supported, which provides evidence that neither the additional accountability of those entities required to file under the Single Audit act nor the narrower filing window lead to decreased audit report delay.

Hypothesis 5b predicts that governments required to report according to the requirements of the Single Audit Act will be associated with audit reports that are filed in a timely manner.

The results of the logistic regression indicate that SINGLEAUDIT is not significantly associated with timely filing of financial reports (Table 8). Hypothesis 5b is not supported.

It was noted that only 27.5 percent of Mississippi entities required to file Single Audit reports did so before the nine-month deadline. Of those entities, the majority (77.3 percent) managed to file their full audit report with the state auditor before the one-year deadline. Of those filing timely Single Audit reports but late full-scope audit reports to the state, only one city filed its full-scope audit report more than three weeks after the one-year deadline. Of the 72.5 percent of Mississippi entities that filed late Single Audit reports, the majority (81.0 percent) also filed late audits with the state auditor.

#### *Audit Environment—Major Funds*

Hypothesis 6a predicts that the total number of reported major funds will increase audit report delay. Prior studies of governmental audit delay were conducted prior to the enactment of GASB Statement No. 34, which required the determination and reporting of major funds, making this the first study to examine the impact of major funds on audit delay. Payne & Jenson (2002) included an indicator variable coded 0 if the entity reported three or fewer funds and 1 if the entity reported more than three funds. Their results provided no evidence of a significant relationship between the total number of reported funds and audit report delay.

In this study, FUNDS is defined as the total number of major funds reported on the government's financial statements. The results of the OLS regression indicate that the total number of reported major funds is not significantly associated with longer audit report delay (Table 7). Hypothesis 6a is not supported.



Hypothesis 6b predicts that a higher number of reported major funds will be associated with audits filed beyond the state-mandated filing deadline. Results of the logistic regression indicate that FUNDS is not significantly associated with untimely financial reporting (Table 8). Hypothesis 6b is not supported.

#### *Audit Environment—Travel Distance*

Hypothesis 7a predicts that a greater total travel distance between the auditor's office and the audit client's office will be associated with longer audit report delays. Prior research of governmental audit delay has not examined this variable with regard to audit timeliness. The results of the OLS regression provide no evidence that as the mileage traveled increases, so does the amount of delay in filing the audited financial statements (Table 7). Hypothesis 7a is not supported.

Hypothesis 7b predicts that a greater travel distance between the auditor's office and the audit client's office will be associated with audit reports failing to meet state-mandated filing deadlines. The results of the logistic regression provide minimal evidence that greater travel distance is associated with untimely financial statement reports ( $p < 0.095$ , one-tailed) (Table 8).

#### *Audit Environment—Auditor Expertise*

Hypothesis 8a predicts that the total number of governmental attestation engagements performed by an audit firm will be associated with audit delay. Payne & Jenson (2002) measured auditor expertise with an indicator variable coded 1 if the auditor performed two or more municipal audits within their sample and 0 otherwise. The results of their study provided evidence that as the number of municipal audit clients increases, the audit report delay decreases.

Carslaw et al (2007) measured auditor expertise with an indicator variable coded 1 if the auditor performed more than five single audits during the year and 0 otherwise. They found that auditor expertise significantly decreased audit report delay for school districts in three of the five years they examined.

In this study, auditor expertise is measured by the total number of governmental audit and attestation engagements performed by the audit firm during the year. Regression results indicate that auditor expertise, as measured by the total number of clients, is not significantly associated with audit report delay (Table 7). Hypothesis 8a is not supported.

Hypothesis 8b predicts that the total number of governmental audit and attestation engagements performed by the audit firm will be associated with whether audit reports meet state-mandated audit-filing deadlines. The results of the logistic regression indicate no significant relationship between the number of audit clients and timely financial reporting (Table 8). Hypothesis 8b is not supported.<sup>9</sup>

### **Additional Procedures—Full-Scope Audit Engagements**

#### *Audit Findings*

To achieve a more thorough understanding of the impact of audit findings on the level of audit report delay, the OLS regression and the logistic regression models were recomputed after replacing the total number of audit findings (FINDINGS) with the total number of more serious audit findings, those classified by the auditor as material weaknesses (MATWEAK). This excludes audit findings classified as either (1) noncompliance with laws and regulations or (2) significant deficiencies not deemed to be material weaknesses. The mean total number of

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<sup>9</sup> The regression results yielded significant results for the control variable COUNTY. That variable is discussed in detail later in this chapter.

material-weakness findings reported for all entities in the sample was 1.30 (1.10 for municipalities; 1.71 for counties). For governmental entities filing audits in a timely manner, the mean number of material-weakness findings was 0.76, while the mean number of material-weakness findings for late filers was 1.67. The results of the regression model that includes MATWEAK are presented in Table 9, and the results of the logistic model that includes MATWEAK are presented in Table 10.

Results of the OLS regression (Table 9) indicate that the total number of material-weakness findings (MATWEAK) is positively and significantly associated with audit report delay ( $p=0.003$ , one-tailed). Results of the logistic regression (Table 10) indicate that MATWEAK does have some association with whether audits are filed on time, but it not carry the same level of statistical significance ( $p=0.057$ , one-tailed) as the OLS regression measuring the effect of material weaknesses on the number of days of audit delay.

Separate OLS and logistic regression models were also computed after excluding all material-weakness findings and including only noncompliance and significant-deficiency findings (OTHERFIND). The purpose of these models are to provide more comprehensive evidence regarding the effect the audit finding's level of seriousness has on the delay of the audit report. The mean total number of noncompliance and significant deficiency findings reported for all entities in the sample was 2.80 (1.78 for municipalities; 4.87 for counties). For governmental entities filing audits in a timely manner, the mean number of noncompliance and significant deficiency findings was 1.60, while the mean number of noncompliance and significant deficiency findings for late filers was 3.62. The results of the regression model that includes OTHERFIND are presented in Table 11, and the results of the logistic model that includes OTHERFIND are presented in Table 12.

**Table 9: OLS Regression Results Showing How Audit Findings Classified as Material Weaknesses Contribute to Delay of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.656	0.115	49.095	<0.001
<i>Report Message Content and Managerial Competency:</i>					
POSITION	-	-0.022	0.022	-1.005	0.158
PERFORMANCE	-	0.441	0.275	1.606	0.945
<b>MATWEAK</b>	<b>+</b>	<b>0.051</b>	<b>0.018</b>	<b>2.846</b>	<b>0.003</b>
<b>OPINION</b>	<b>+</b>	<b>0.222</b>	<b>0.085</b>	<b>2.600</b>	<b>0.005</b>
<i>Accountability:</i>					
DEBT (millions)	-	-0.001	0.001	-1.137	0.129
SINGLEAUDIT	-	0.032	0.065	0.493	0.689
<i>Audit Environment:</i>					
FUNDS	+	0.011	0.023	0.475	0.318
DISTANCE (hundreds)	+	-0.004	0.069	-0.051	0.521
EXPERTISE	±	-0.001	0.005	-0.298	0.766
<i>Control Variables:</i>					
<b>COUNTY</b>	<b>+</b>	<b>0.376</b>	<b>0.070</b>	<b>5.385</b>	<b>&lt;0.001</b>

<sup>a</sup> *MATWEAK* is defined as the total number of audit findings issued by the auditor that were classified as material weaknesses. See Table 3 for a description of other variables

n	166
Model F-statistic	6.747
Prob (F-statistic)	<0.001
R <sup>2</sup>	0.303
Adjusted R <sup>2</sup>	0.258

*Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.*

**Table 10: Logistic Regression Results Showing How Audit Findings Classified as Material Weaknesses Contribute to Late Filings of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		2.197	0.956	5.280	0.022	9.001
<i>Report Message Content and Managerial Competency:</i>						
POSITION	-	-0.149	0.134	1.232	0.134	0.862
PERFORMANCE	-	1.469	1.902	0.597	0.780	4.347
<b>MATWEAK</b>	<b>+</b>	<b>0.210</b>	<b>0.133</b>	<b>2.509</b>	<b>0.057</b>	<b>1.234</b>
<b>OPINION</b>	<b>+</b>	<b>1.069</b>	<b>0.547</b>	<b>3.819</b>	<b>0.026</b>	<b>0.344</b>
<i>Accountability:</i>						
<b>DEBT (millions)</b>	<b>-</b>	<b>-0.010</b>	<b>0.007</b>	<b>2.302</b>	<b>0.065</b>	<b>0.990</b>
SINGLEAUDIT	-	-0.344	0.395	0.759	0.192	0.709
<i>Audit Environment:</i>						
FUNDS	+	0.120	0.137	0.762	0.192	1.127
DISTANCE (hundreds)	+	0.584	0.462	1.601	0.103	1.794
EXPERTISE	±	0.009	0.030	0.087	0.768	1.009
<i>Control Variables:</i>						
<b>COUNTY</b>	<b>+</b>	<b>1.796</b>	<b>0.466</b>	<b>14.875</b>	<b>&lt;0.001</b>	<b>0.166</b>

<sup>a</sup> MATWEAK is defined as the total number of audit findings issued by the auditor that were classified as material weaknesses. See Table 3 for a description of other variables

n 166

$\chi^2$  41.81, p<0.001

Cox & Snell R<sup>2</sup> 0.223

Nagelkerke R<sup>2</sup> 0.300

McFadden's R<sup>2</sup> 0.186

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

**Table 11: OLS Regression Results Showing How Audit Findings Not Classified as Material Weaknesses Contribute to Delay of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.603	0.116	48.143	<0.001
<i>Report Message Content and Managerial Competency:</i>					
POSITION	-	-0.010	0.022	-0.468	0.321
PERFORMANCE	-	0.357	0.276	1.295	0.902
<b>OTHERFIND</b>	+	<b>0.022</b>	<b>0.009</b>	<b>2.578</b>	<b>0.006</b>
<b>OPINION</b>	+	<b>0.285</b>	<b>0.079</b>	<b>3.626</b>	<b>&lt;0.001</b>
<i>Accountability:</i>					
DEBT (millions)	-	-0.001	0.001	-1.184	0.119
SINGLEAUDIT	-	0.024	0.065	0.639	0.643
<i>Audit Environment:</i>					
FUNDS	+	0.017	0.022	0.754	0.226
DISTANCE (hundreds)	+	0.000	0.070	-0.005	0.996
EXPERTISE	±	0.001	0.005	0.267	0.789
<i>Control Variables:</i>					
<b>COUNTY</b>	+	<b>0.337</b>	<b>0.075</b>	<b>4.467</b>	<b>&lt;0.001</b>

<sup>a</sup> *OTHERFIND* is defined as the total number of audit findings issued by the auditor that were not classified as material weaknesses. See Table 3 for a description of other variables

n 166

Model F-statistic 6.549

Prob (F-statistic) <0.001

R<sup>2</sup> 0.297

Adjusted R<sup>2</sup> 0.252

*Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.*

**Table 12: Logistic Regression Results Showing How Audit Findings Not Classified as Material Weaknesses Contribute to Late Filings of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		2.107	0.963	4.793	0.029	8.227
<i>Report Message Content and Managerial Competency:</i>						
POSITION	-	-0.103	0.135	0.581	0.223	0.902
PERFORMANCE	-	1.067	1.882	0.321	0.715	2.906
<b>OTHERFIND</b>	+	<b>0.115</b>	<b>0.069</b>	<b>2.783</b>	<b>0.048</b>	<b>1.122</b>
<b>OPINION</b>	+	<b>1.299</b>	<b>0.514</b>	<b>6.389</b>	<b>0.006</b>	<b>0.273</b>
<i>Accountability:</i>						
<b>DEBT (millions)</b>	-	<b>-0.011</b>	<b>0.007</b>	<b>2.211</b>	<b>0.069</b>	<b>0.989</b>
SINGLEAUDIT	-	0.295	0.395	0.559	0.773	0.744
<i>Audit Environment:</i>						
FUNDS	+	0.123	0.135	0.831	0.181	1.131
DISTANCE (hundreds)	+	0.554	0.447	1.540	0.108	1.741
EXPERTISE	±	0.012	0.029	0.174	0.676	1.012
<i>Control Variables:</i>						
<b>COUNTY</b>	+	<b>1.633</b>	<b>0.485</b>	<b>11.335</b>	<b>0.001</b>	<b>0.195</b>

<sup>a</sup> OTHERFIND is defined as the total number of audit findings issued by the auditor that were not classified as material weaknesses. See Table 3 for a description of other variables

N	166
$\chi^2$	42.344, p<0.001
Cox & Snell R <sup>2</sup>	0.225
Nagelkerke R <sup>2</sup>	0.304
McFadden's R <sup>2</sup>	0.188

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

The results of the OLS regression (Table 11) provide evidence that the total number of compliance and significant deficiency findings (OTHERFIND) is positively and significantly associated with audit report delay ( $p=0.006$ , one-tailed). The results of the logistic regression (Table 12) provide evidence that OTHERFIND is positively and significantly associated with audit reports failing to meet the state-mandated filing deadlines ( $p=0.048$ , one-tailed). Taken as a whole, the evidence regarding audit findings indicates that the quantity of instances that result in audit findings has a slightly greater impact on audit delay than does the audit finding's level of materiality.

### *Major Funds*

As mentioned previously, prior studies of governmental audit delay were conducted prior to the enactment of GASB Statement No. 34, which required the determination and reporting of major funds, making this the first study to examine the impact of major funds on audit delay. Payne & Jenson (2002) included an indicator variable coded 0 if the entity reported three or fewer funds and 1 if the entity reported more than three funds. Their results provided no evidence of a significant relationship between the total number of reported funds and audit report delay. To approach this area in a way that is consistent with prior research, the FUNDS variable in this study was redefined in a way similar to Payne & Jenson (2002). The variable was expressed as a categorical variable with 0 indicating three or fewer reported major funds and 1 indicating greater than three reported major funds. Frequencies indicated that 55.4 percent of the observations in the sample had three or fewer major funds, while 44.6 percent had greater than three reported major funds. Results of the OLS regression are presented in Table 13, while results of the logistic regression are presented in Table 14.



**Table 13: OLS Regression Results Providing Further Evidence on How the Number of Reported Major Funds Contributes to Delay of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.641	0.088	63.901	<0.001
<i>Report Message Content and Managerial Competency:</i>					
POSITION	-	-0.013	0.022	-0.579	0.282
PERFORMANCE	-	0.379	0.273	1.390	0.917
<b>FINDINGS</b>	+	<b>0.020</b>	<b>0.007</b>	<b>3.051</b>	<b>0.002</b>
<b>OPINION</b>	+	<b>0.246</b>	<b>0.081</b>	<b>3.045</b>	<b>0.002</b>
<i>Accountability:</i>					
DEBT (millions)	-	-0.001	0.001	-1.220	0.112
SINGLEAUDIT	-	0.033	0.063	0.517	0.697
<i>Audit Environment:</i>					
FUNDS(RE-DEFINED)	+	0.045	0.063	0.720	0.236
DISTANCE (hundreds)	+	0.003	0.069	0.042	0.484
EXPERTISE	±	0.000	0.005	0.011	0.991
<i>Control Variables:</i>					
<b>COUNTY</b>	+	<b>0.326</b>	<b>0.073</b>	<b>4.443</b>	<b>&lt;0.001</b>

<sup>a</sup> FUNDS(RE-DEFINED) is an indicator variable coded 1 if the governmental entity reported greater than 3 major funds, 0 otherwise. See Table 3 for a description of other variables

N	166
Model F-statistic	6.968
Prob (F-statistic)	<0.001
R <sup>2</sup>	0.31
Adjusted R <sup>2</sup>	0.266

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

**Table 14: Logistic Regression Results Providing Further Evidence on How the Number of Reported Major Funds Contributes to Late Filings of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		2.782	0.947	8.634	0.003	16.155
<i>Report Message Content and Managerial Competency:</i>						
POSITION	-	-0.117	0.134	0.769	0.191	0.889
PERFORMANCE	-	1.356	1.893	0.513	0.763	3.879
<b>FINDINGS</b>	+	<b>0.104</b>	<b>0.056</b>	<b>3.475</b>	<b>0.031</b>	<b>1.110</b>
<b>OPINION</b>	+	<b>1.172</b>	<b>0.530</b>	<b>4.883</b>	<b>0.014</b>	<b>0.310</b>
<i>Accountability:</i>						
<b>DEBT (millions)</b>	-	<b>-0.012</b>	<b>0.007</b>	<b>2.544</b>	<b>0.056</b>	<b>0.988</b>
SINGLEAUDIT	-	0.343	0.390	0.772	0.810	0.710
<i>Audit Environment:</i>						
<b>FUNDS(RE-DEFINED)</b>	+	<b>0.597</b>	<b>0.386</b>	<b>2.394</b>	<b>0.061</b>	<b>0.551</b>
<b>DISTANCE (hundreds)</b>	+	<b>0.591</b>	<b>0.453</b>	<b>1.706</b>	<b>0.096</b>	<b>1.806</b>
EXPERTISE	±	0.007	0.030	0.059	0.809	1.007
<i>Control Variables:</i>						
<b>COUNTY</b>	+	<b>1.651</b>	<b>0.482</b>	<b>11.709</b>	<b>0.001</b>	<b>0.192</b>

<sup>a</sup> FUNDS(RE-DEFINED) is an indicator variable coded 1 if the governmental entity reported greater than 3 major funds, 0 otherwise. See Table 3 for a description of other variables

n 166

$\chi^2$  45.016, p<0.001

Cox & Snell R<sup>2</sup> 0.238

Nagelkerke R<sup>2</sup> 0.320

McFadden's R<sup>2</sup> 0.200

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

The results of the OLS regression (Table 13) are similar to those previously reported and indicate no significance with regard to audit report delay. The results of the logistic regression model (Table 14) provided some evidence that a more complex audit, as indicated by the total number of reported major funds, has some association with untimely filing of audit reports ( $p=0.061$ , one-tailed).

#### *Travel Distance*

Regarding the DISTANCE variable, it is reasonable to assume that the amount of auditor procrastination due to travel considerations might be more pronounced for auditors having multiple governmental audit clients. As such, the OLS and logistic regressions were recomputed after omitting all observations from the sample that had auditors with only one governmental attestation client in fiscal-year 2007. This reduces the sample to 139 observations. For this reduced sample, the mean total travel distance between the auditor's office and the audit client's office was 40.42 miles. For governmental entities that filed timely audits, the mean travel distance was 27.38. For governmental entities that filed late audits, the mean travel distance was 49.23. The results of the OLS regression are presented in Table 15, and the results of the logistic regression are presented in Table 16.

Again, the results of the OLS regression (Table 15) provide no evidence of a positive relationship between travel distance and audit report delay. The results of the logistic regression model (Table 16), however, indicates a stronger relationship between travel distance and

**Table 15: OLS Regression Results Providing Further Evidence on How Travel Distance Contributes to Delay of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.468	0.135	40.537	<0.001
<i>Report Message Content and Managerial Competency:</i>					
POSITION	-	0.013	0.025	0.533	0.703
PERFORMANCE	-	0.638	0.350	1.823	0.965
<b>FINDINGS</b>	+	<b>0.020</b>	<b>0.008</b>	<b>2.484</b>	<b>0.007</b>
<b>OPINION</b>	+	<b>0.249</b>	<b>0.087</b>	<b>2.880</b>	<b>0.003</b>
<i>Accountability:</i>					
DEBT (millions)	-	0.000	0.001	-0.264	0.792
SINGLEAUDIT	-	0.032	0.072	0.447	0.672
<i>Audit Environment:</i>					
FUNDS	+	0.027	0.026	1.036	0.151
DISTANCE (hundreds)	+	0.025	0.072	0.346	0.365
EXPERTISE	±	0.001	0.005	0.212	0.832
<i>Control Variables:</i>					
<b>COUNTY</b>	+	<b>0.325</b>	<b>0.082</b>	<b>3.979</b>	<b>&lt;0.001</b>

<sup>a</sup> See Table 3 for a description of the variables

n	139
Model F-statistic	5.510
Prob (F-statistic)	<0.001
R <sup>2</sup>	0.301
Adjusted R <sup>2</sup>	0.246

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

**Table 16: Logistic Regression Results Providing Further Evidence on How Travel Distance Contributes to Late Filings of Full-scope Audits**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		1.182	1.037	1.300	0.254	3.262
<i>Report Message Content and Managerial Competency:</i>						
POSITION	-	0.004	0.147	0.001	0.510	1.004
PERFORMANCE	-	1.767	2.085	0.718	0.802	5.852
<b>FINDINGS</b>	<b>+</b>	<b>0.111</b>	<b>0.059</b>	<b>3.548</b>	<b>0.030</b>	<b>1.118</b>
<b>OPINION</b>	<b>+</b>	<b>1.265</b>	<b>0.553</b>	<b>5.240</b>	<b>0.011</b>	<b>0.282</b>
<i>Accountability:</i>						
DEBT (millions)	-	-0.008	0.008	0.904	0.171	0.992
SINGLEAUDIT	-	0.383	0.430	0.793	0.814	0.682
<i>Audit Environment:</i>						
FUNDS	+	0.163	0.156	1.097	0.148	1.177
<b>DISTANCE (hundreds)</b>	<b>+</b>	<b>0.763</b>	<b>0.465</b>	<b>2.691</b>	<b>0.051</b>	<b>2.146</b>
EXPERTISE	±	0.028	0.032	0.761	0.383	1.029
<i>Control Variables:</i>						
<b>COUNTY</b>	<b>+</b>	<b>1.511</b>	<b>0.513</b>	<b>8.684</b>	<b>0.002</b>	<b>0.221</b>

<sup>a</sup> See Table 3 for a description of the variables

n	139
$\chi^2$	37.472, p<0.001
Cox & Snell R <sup>2</sup>	0.236
Nagelkerke R <sup>2</sup>	0.319
McFadden's R <sup>2</sup>	0.200

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

untimely filing of financial audits ( $p=0.051$ , one-tailed). These results provide some support for Hypothesis 7b.

### *Auditor Expertise*

Payne & Jenson (2002) measured auditor expertise with an indicator variable coded 1 if the auditor performed two or more municipal audits within their sample and 0 otherwise. The results of their study provided evidence that as the number of municipal audit clients increases, the audit report delay decreases. To remain consistent with this previous study, the OLS regression and logistic regression were recomputed after expressing the EXPERTISE variable as a categorical variable coded 1 for audit firms that performed more than one governmental audit or attestation engagement during the year and 0 otherwise. The results (not tabulated) provided no further evidence that the number of government attestation clients was significantly associated with audit report delay.

### *Government Performance*

It was previously reported that one outlying observation was excluded from the regression models in the study. That particular municipality received a \$36 million grant during the year, which greatly increased its PERFORMANCE ratio (defined as Change In Net Assets / Total Net Assets). That municipality also had a 1,024-day audit report delay. The results of the OLS regression that includes that municipality in the sample are presented in Table 17, while the results of the logistic regression that includes that municipality are presented in Table 18.

Hypothesis 1a predicted that favorable performance by the governmental entity will be associated with shorter audit delay, while Hypothesis 1b predicted that favorable performance

**Table 17: Results of Ordinary Least Squares Regression of Delay for Full-scope Audits; Outlying Data Point Included**

<b>Variables<sup>a</sup></b>	<b>Predicted Sign</b>	<b>Coefficient Estimate</b>	<b>Standard Error</b>	<b>t-statistic</b>	<b>p-value</b>
Intercept		5.603	0.114	48.981	<0.001
<i>Report Message Content and Managerial Competency:</i>					
POSITION	-	-0.012	0.022	-0.548	0.585
<b>PERFORMANCE</b>	-	<b>0.514</b>	<b>0.236</b>	<b>2.173</b>	<b>0.031</b>
<b>FINDINGS</b>	+	<b>0.021</b>	<b>0.007</b>	<b>3.157</b>	<b>0.002</b>
<b>OPINION</b>	+	<b>0.260</b>	<b>0.079</b>	<b>3.270</b>	<b>0.001</b>
<i>Accountability:</i>					
DEBT (millions)	-	-0.001	0.001	-1.234	0.219
SINGLEAUDIT	-	0.033	0.065	0.515	0.607
<i>Audit Environment:</i>					
FUNDS	+	0.013	0.022	0.569	0.570
DISTANCE (hundreds)	+	0.002	0.069	0.035	0.972
EXPERTISE	±	0.000	0.005	0.047	0.963
<i>Control Variables:</i>					
<b>COUNTY</b>	+	<b>0.325</b>	<b>0.074</b>	<b>4.395</b>	<b>&lt;0.001</b>

<sup>a</sup> See Table 3 for a description of the variables

n	167
Model F-statistic	7.569
Prob (F-statistic)	<0.001
R <sup>2</sup>	0.327
Adjusted R <sup>2</sup>	0.284

Note: Two-tailed test

**Table 18: Logistic Regression Results Showing Factors Contributing to Late Filings of Full-scope Audits; Outlying Data Point Included**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		1.941	0.977	3.948	0.047	6.966
<i>Report Message Content and Managerial Competency:</i>						
POSITION	-	-0.117	0.133	0.767	0.381	0.445
PERFORMANCE	-	1.372	1.808	0.576	0.448	3.942
<b>FINDINGS</b>	<b>+</b>	<b>0.105</b>	<b>0.055</b>	<b>3.636</b>	<b>0.057</b>	<b>1.110</b>
<b>OPINION</b>	<b>+</b>	<b>1.151</b>	<b>0.525</b>	<b>4.796</b>	<b>0.029</b>	<b>0.316</b>
<i>Accountability:</i>						
DEBT (millions)	-	-0.011	0.007	2.340	0.126	0.989
SINGLEAUDIT	-	0.321	0.395	0.657	0.418	0.726
<i>Audit Environment:</i>						
FUNDS	+	0.116	0.136	0.727	0.394	1.123
DISTANCE (hundreds)	+	0.595	0.453	1.721	0.190	1.812
EXPERTISE	±	0.009	0.030	0.097	0.755	1.009
<i>Control Variables:</i>						
<b>COUNTY</b>	<b>+</b>	<b>1.613</b>	<b>0.483</b>	<b>11.167</b>	<b>0.001</b>	<b>0.199</b>

<sup>a</sup> See Table 3 for a description of the variables

n	167
$\chi^2$	44.257
Cox & Snell R <sup>2</sup>	0.233
Nagelkerke R <sup>2</sup>	0.314
McFadden's R <sup>2</sup>	0.196

Note: Two-tailed test



will be associated with timely audit reports. As previously reported, the coefficient for this variable was in the opposite direction than was predicted, however that variable was not statistically significant. The hypotheses in this study were based on the premise that good news is reported more quickly than bad news is reported and that favorable financial statement ratios are an indication of higher quality management, but the results provide no evidence to support this premise in a governmental setting. Table 17 reports two-tailed test results for the purpose of highlighting the need for future research in this area. The results indicate that PERFORMANCE would have resulted in a statistically significant positive association between PERFORMANCE and DELAY, if the outlying observation was included in the model. The results of the logistic regression, presented in Table 18, reveal no significant relationship between PERFORMANCE and LATE, however, the results presented in Table 17 indicate a need for future research in this area.

### *Municipal Audits*

Table 5 illustrates that large differences exist between counties and municipalities on some of the independent variables used in this study. The control variable, COUNTY, was statistically significant in each regression model that was estimated, thus indicating that county audits take significantly longer to complete than do municipal audits. This is consistent with Johnson (1998). To provide further evidence that the magnitude of some of the independent variables for the counties in the sample did not drive the regression results, separate OLS and logistic regressions were computed for only the municipalities in the sample. The results of the OLS regression are presented in Table 19, and the results of the logistic regression are presented in Table 20.

**Table 19: Results of Ordinary Least Squares Regression of Delay for Full-scope Audits of Municipalities**

<b>Variables<sup>a</sup></b>	<b>Predicted Sign</b>	<b>Coefficient Estimate</b>	<b>Standard Error</b>	<b>t-statistic</b>	<b>p-value</b>
Intercept		5.673	0.155	36.622	<0.001
<i>Report Message Content and Managerial Competency:</i>					
<b>POSITION</b>	-	<b>-0.045</b>	<b>0.034</b>	<b>-1.319</b>	<b>0.095</b>
PERFORMANCE	-	0.675	0.419	1.612	0.945
<b>FINDINGS</b>	+	<b>0.031</b>	<b>0.012</b>	<b>2.642</b>	<b>0.005</b>
<b>OPINION</b>	+	<b>0.354</b>	<b>0.108</b>	<b>3.273</b>	<b>0.001</b>
<i>Accountability:</i>					
DEBT (millions)	-	-0.001	0.001	-0.856	0.197
SINGLEAUDIT	-	0.102	0.089	1.150	0.874
<i>Audit Environment:</i>					
FUNDS	+	-0.015	0.030	-0.492	0.688
DISTANCE (hundreds)	+	0.002	0.109	0.014	0.495
EXPERTISE	±	0.001	0.007	0.002	0.844

<sup>a</sup> See Table 3 for a description of the variables

n	111
Model F-statistic	3.684
Prob (F-statistic)	0.001
R <sup>2</sup>	0.247
Adjusted R <sup>2</sup>	0.18

*Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.*

**Table 20: Logistic Regression Results Showing Factors Contributing to Late Filings of Full-scope Audits of Municipalities**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		1.321	1.099	1.444	0.230	3.747
<i>Report Message Content and Managerial Competency:</i>						
<b>POSITION</b>	-	<b>-0.302</b>	<b>0.191</b>	<b>2.504</b>	<b>0.057</b>	<b>0.739</b>
PERFORMANCE	-	1.294	2.299	0.317	0.714	3.648
<b>FINDINGS</b>	+	<b>0.100</b>	<b>0.067</b>	<b>2.223</b>	<b>0.068</b>	<b>1.105</b>
<b>OPINION</b>	+	<b>1.289</b>	<b>0.588</b>	<b>4.812</b>	<b>0.014</b>	<b>3.629</b>
<i>Accountability:</i>						
DEBT (millions)	-	-0.010	0.008	1.385	0.120	0.990
SINGLEAUDIT	-	0.519	0.467	1.237	0.867	0.595
<i>Audit Environment:</i>						
FUNDS	+	-0.040	0.164	0.059	0.596	0.961
<b>DISTANCE (hundreds)</b>	+	<b>0.813</b>	<b>0.577</b>	<b>1.986</b>	<b>0.080</b>	<b>2.256</b>
EXPERTISE	±	0.030	0.036	0.668	0.414	1.030

<sup>a</sup> See Table 3 for a description of the variables

n	111
$\chi^2$	20.485, p=0.015
Cox & Snell R <sup>2</sup>	0.169
Nagelkerke R <sup>2</sup>	0.225
McFadden's R <sup>2</sup>	0.090

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

The results indicate that the governmental entity's financial statement position (POSITION) is a more important determinant of DELAY for municipalities ( $p=0.095$ , one-tailed), with a more favorable financial statement position resulting in somewhat shorter audit delay. POSITION is also more strongly associated with more timely audits for municipalities ( $p=0.057$ , one-tailed). Also, for municipalities, FINDINGS remain strongly associated with DELAY ( $p=0.005$ , one-tailed), but not as strongly associated with LATE audits ( $p=0.068$ , one-tailed). Finally, DEBT is no longer a marginally significant determinant of LATE in the model containing only municipalities.

#### *A Different Measure of DELAY*

As previously mentioned, the majority of the prior studies of governmental audit delay measured audit delay as the number of days between the entity's fiscal year end and the date on the audit report. In this study, audit delay is measured as the number of days between the entity's fiscal year end and the date the audit or compilation was received by the state auditor's office. This measure is perceived to be superior, as it more closely represents the date in which the reports are made available to the public. The date on the audit report is also subject to manipulation and inconsistent interpretation and application of the auditing standards.

For purposes of comparison, the OLS model from this study was examined after re-defining DELAY as the number of days between the entity's fiscal year end and the date on the audit report. Results of the OLS regression are presented in Table 21. In this model, the variables FINDINGS, OPINION, and COUNTY remain significant and in the predicted direction. The most striking difference occurs with the DISTANCE variable. In the original model (Table 7), DISTANCE was not significant but was in the predicted direction. In the

**Table 21: Results of Ordinary Least Squares Regression of Delay of Full-scope Audits: DELAY Measured by Date on the Audit Report**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.202	0.149	34.960	<0.001
<i>Report Message Content and Managerial Competency:</i>					
POSITION	-	-0.034	0.028	-1.178	0.121
PERFORMANCE	-	0.630	0.354	1.783	0.962
<b>FINDINGS</b>	<b>+</b>	<b>0.025</b>	<b>0.009</b>	<b>2.925</b>	<b>0.002</b>
<b>OPINION</b>	<b>+</b>	<b>0.325</b>	<b>0.105</b>	<b>3.101</b>	<b>0.001</b>
<i>Accountability:</i>					
DEBT (millions)	-	-0.001	0.001	-0.876	0.191
SINGLEAUDIT	-	0.082	0.084	0.983	0.837
<i>Audit Environment:</i>					
FUNDS	+	0.034	0.029	1.164	0.123
DISTANCE (hundreds)	+	-0.152	0.090	-1.690	0.954
EXPERTISE	±	0.001	0.006	0.154	0.878
<i>Control Variables:</i>					
<b>COUNTY</b>	<b>+</b>	<b>0.482</b>	<b>0.096</b>	<b>5.028</b>	<b>&lt;0.001</b>

<sup>a</sup> See Table 3 for a description of the variables

n	166
Model F-statistic	7.611
Prob (F-statistic)	<0.001
R <sup>2</sup>	0.329
Adjusted R <sup>2</sup>	0.286

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

model with DELAY redefined, the coefficient for DISTANCE is in the opposite direction as predicted and two-tailed test results would result in marginal significance ( $p=0.093$ , two-tailed). The coefficient for the PERFORMANCE variable in the original model was in the opposite direction as predicted. In the model with DELAY redefined, the coefficient for the PERFORMANCE variable is also in the opposite direction as predicted but two-tailed test results would have resulted in marginal significance ( $p=0.077$ , two-tailed). The findings concerning DISTANCE and PERFORMANCE between the two models provide some evidence that different findings may occur depending on how DELAY is measured in the model.

### **Compilation and Agreed-upon-procedures Engagements**

In addition to examining audit delay for full-scope audits in governments, this research also examines the delay associated with other attestation engagements in local governments in Mississippi. In Mississippi, the accounting requirements, and thus the auditing requirements, depend on the amount of municipal revenues or expenditures. Municipalities with revenues or expenditures totaling less than \$1 million may, in lieu of contracting for a full-scope audit of financial statements prepared in accordance with GAAP, contract for the preparation of a compilation report after the auditor applies certain agreed-upon procedures.

Similar to the procedures applied to the full-scope audits in this study, OLS regression is used to test whether certain independent variables have an effect on the number of days between the fiscal year end and the date in which the final compilation report is submitted to the Office of the State Auditor. The research also utilizes logistic regression to test whether certain independent variables are associated with whether compiled financial statements are submitted to the Office of the State Auditor within the state-mandated timeframe of one year.

Some of the independent variables examined for full-scope audits in this study are not applicable to compilation engagements and are not included in the OLS and logistic regression models. PERFORMANCE and POSITION are not included since only a statement of cash receipts and disbursements is presented in the compilation report, and information to compute key financial performance and financial position ratios are typically not available. OPINION is not included since rendering an audit opinion is beyond the scope of a compilation engagement. SINGLEAUDIT is not included since all municipalities requiring a single audit are also required to complete a full-scope audit. Also, the control variable, COUNTY, is not applicable to these models since all Mississippi counties received full-scope audits during the year. The variable, FUNDS, is redefined as the total number of reported funds, since the major-funds classification applies only to full-scope audits.

The following independent variables are examined regarding compilation engagements: (1) the total number of reported findings (FINDINGS), (2) the total amount of bonded and other long-term indebtedness (DEBT), (3) the total number of reported funds (FUNDS), (4) the total number of miles between the auditor's office and the compilation client's office (DISTANCE), and (5) the total number of audit and attestation engagements performed by the audit firm (EXPERTISE). This section discusses the findings concerning the following research questions:

#### *Report Content and Managerial Competency*

- 1) Is the total number of reported findings a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

### *Accountability*

- 2) Is the total amount of bonded and other long-term indebtedness a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

### *Audit Environment*

- 3) Is the number funds reported in the government's financial statements a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?
- 4) Is the number of miles between the auditor's firm and the compilation client's office a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?
- 5) Is the total number of governmental audit and attestation engagements performed by the audit firm a significant predictor of (a) compilation report delay and (b) compilation reports meeting or failing to meet state-mandated filing deadlines?

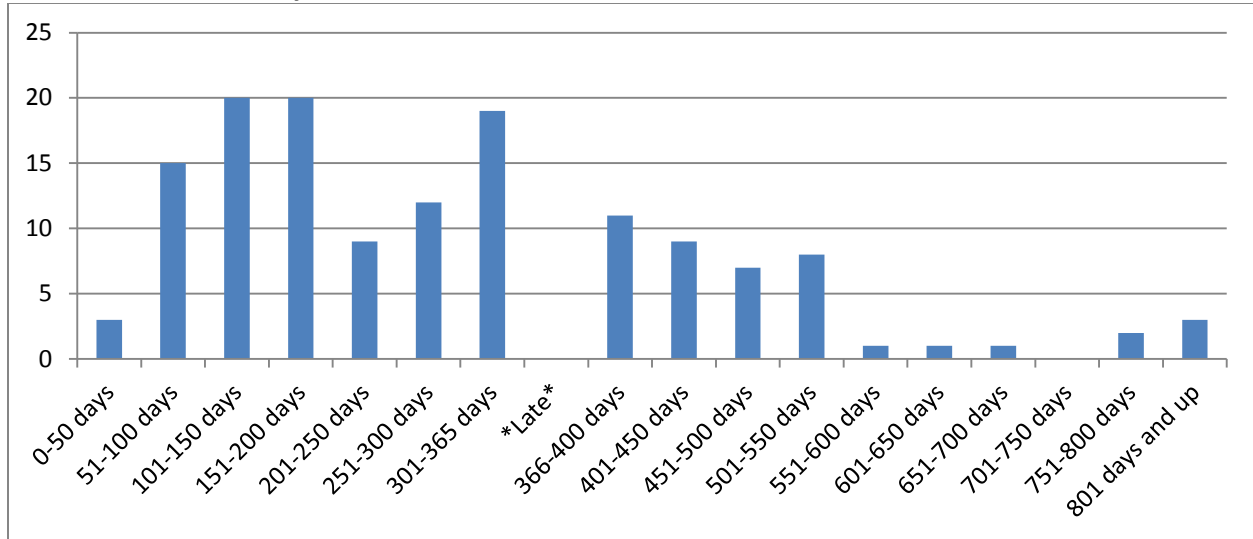
### *The Sample:*

The data used to examine municipal compilation delay were obtained from the compiled financial statements of Mississippi governments for the fiscal year ending September 30, 2007. A listing of Mississippi municipalities was obtained that contained an initial sample of 151 entities having submitted compiled financial statements to the state auditor. Data were missing



from 17 of those observations, leaving a final sample of 134. Compiled financial statements were obtained for each municipality either from the website of the Mississippi Office of the State Auditor or directly from that office when the compiled financial statements were not present on the website.

**Figure 2: Frequencies in Which Compilation Reports Were Submitted to the Mississippi Office of the State Auditor for Fiscal-year 2007**



### **Descriptive Information—Compilation Engagements**

Figure 2 presents a histogram illustrating the frequencies in which Mississippi governments completing compilations for fiscal-year 2007 filed those compilations with the Mississippi Office of the State Auditor during certain ranges of days around the due date. Table 22 presents descriptive statistics for compilations filed on or before the state-mandated deadline and compilations filed after the state-mandated deadline. Along with statistics for all 134 governmental entities in the sample, the table presents statistics for 41 governmental entities that filed late compilations and 93 governmental entities that filed timely compilations. Preliminary univariate analysis of each independent variable was performed. Differences for these

<b>Table 22: Descriptive Statistics for Governments Completing Compilations and a Comparison of Late and Timely Compilations</b>			
<b>Variables<sup>a</sup></b>	<b>Total (n=134)</b>	<b>Late Compilations (n=41)</b>	<b>Timely Compilations (N=93)</b>
<b><i>Dependent Variable: DELAY</i></b>			
Mean (Standard Deviation)	289.44 (191.62)	512.46 (166.57)	191.12 (95.28)
Range	22 to 1,179	375 to 1,179	22 to 365
<b><i>Report Message Content and Managerial Competency:</i></b>			
<b>FINDINGS</b>			
Mean (Standard Deviation)	0.89 (1.51)	1.56*** (1.84)	0.59*** (1.23)
Range	0 to 8	0 to 7	0 to 8
<b><i>Accountability:</i></b>			
<b>DEBT (millions)</b>			
Mean (Standard Deviation)	0.34 (0.58)	0.38 (0.62)	0.32 (0.57)
Range	0 to 4.61	0 to 3.11	0 to 4.61
<b><i>Audit Environment:</i></b>			
<b>FUNDS</b>			
Mean (Standard Deviation)	2.98 (1.13)	3.07 (1.23)	2.94 (1.09)
Range	1 to 6	1 to 6	1 to 6
<b>DISTANCE</b>			
Mean (Standard Deviation)	27.91 (29.85)	35.05* (41.91)	24.76* (22.18)
Range	1 to 150	1 to 143	1 to 150
<b>EXPERTISE</b>			
Mean (Standard Deviation)	6.24 (6.05)	5.27 (4.53)	6.67 (6.59)
Range	1 to 24	1 to 24	1 to 24

<sup>a</sup> See Table 3 for a description of the variables

\*\*\*p<0.001 one-tailed test

\*p<0.05 one-tailed test

Note: t-tests were used to determine significant differences between governments filing late compilations and governments filing timely compilations

continuous variables were analyzed using t-tests. Results of those tests are also presented in Table 22.

The mean compilation delay (DELAY) for all entities in the sample was 289.44 days. Of those entities, 30.60 percent failed to submit compiled financial statements to the Office of the State Auditor within the state-mandated one-year deadline. For compilations filed in a timely manner, the mean delay was 191.12 days. For compilations filed past the filing deadline, the mean audit delay was 512.46 days. Results of the t-tests reveal that FINDINGS and DISTANCE differ significantly between timely filers and late filers. Each of these significant variables, along with the other independent variables are discussed in detail below.

The mean total number of findings (FINDINGS) issued for entities in the sample was 0.89. Governmental entities filing timely compilation reports with the state received a mean total of 0.29 findings, while governmental entities filing late compilation reports received a mean total of 1.56 findings. The results of the t-test reveals this to be a significant difference ( $p < 0.001$ , one-tailed).

The mean dollar amount of long-term debt (DEBT) was \$340,000. For entities filing timely compilations, the mean dollar amount of long-term debt was \$320,000. For entities filing late compilations, the mean dollar amount of long-term debt was \$380,000. The results of the t-test did not reveal this to be a significant difference.

The mean number of funds (FUNDS) reported by entities in the sample was 2.98. Entities filing timely compilations reported 2.94 funds on average, while entities filing late compilations reported an average of 3.07 funds. The results of the t-test did not indicate a significant difference regarding FUNDS.

The average travel distance (DISTANCE) between the auditor's office and the compilation client's office was 27.91 miles. Those entities submitting timely compilation reports were 24.07 miles, on average, away from the auditors' offices. Entities submitting late compilation reports were 35.05 miles, on average, away from the auditors' offices. The results of the t-test indicated that this was a significant difference ( $p < 0.05$ , one-tailed).

For auditors captured in the sample, the mean number of governmental audit and attestation clients was 6.24—6.67 for those auditors associated with compilations that were filed in a timely manner and 5.27 for those auditors associated with compilations that were filed past the state-mandated deadline. Results of the t-test did not indicate this to be a significant difference.

The bivariate correlation coefficients among the independent variables included in the model appear in Table 23. DEBT is positively correlated with FUNDS (0.292), and DISTANCE is positively correlated with FINDINGS (0.198). To assess the presence of multicollinearity, variance inflation factors (VIF) and the condition indices were examined. No values of VIF were greater than 1.20. The largest condition index (the condition number) was 8.0. Each of these diagnostic measures provides evidence that no strong multicollinearity issues are present in the model.

### **Results—Compilation Engagements**

In the first phase of testing, an OLS model<sup>10</sup> was estimated using as the dependent variable the natural log of the number of days from fiscal year end until the date the compilation report

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<sup>10</sup> A GEE model with a robust estimator was computed and resulted in the same findings regarding significance.

**Table 23: Bivariate Correlation Coefficients  
Among  
Variables; Compilation Engagements  
n=166**

Variables <sup>a</sup>	DELAY	LATE	FIND- INGS	DEBT	FUNDS	DIST- ANCE	EXPE- RTISE
DELAY	1.000						
LATE	.776**	1.000					
FINDINGS	.305**	.298**	1.000				
DEBT	0.117	0.048	0.098	1.000			
FUNDS	0.057	0.056	-0.015	0.292**	1.000		
DISTANCE	.177*	0.159	0.198*	-0.047	0.059	1.000	
EXPERTISE	-0.114	-0.107	0.048	0.057	0.071	0.075	1.000

<sup>a</sup> See Table 3 for a description of the variables

Pearson Correlations

For the Y/N variables, the Pearson's r is technically a point-biserial correlation coefficient since the variable is a dichotomy

\*\* Correlation is significant at 0.01 level (two-tailed)

\* Correlation is significant at 0.05 level (two-tailed)

was received by the Office of the State Auditor (DELAY). The dependent variable was log transformed because visual inspection of the residual distribution using untransformed data revealed a violation of the normality assumption. Leverage values were examined and no influential data points were observed in the model. An examination of plots of the residuals indicated no problems with heteroskedasticity. Table 24 presents the results of the regression. The model has an  $R^2$  of 0.141, an adjusted  $R^2$  of 0.107, and model F-statistic of 4.203 ( $p=0.001$ ).

In the second phase of testing, a logistic regression analysis was used to determine how the variables examined in the first phase of the study affect the outcome of whether the compiled financial statements are filed within or beyond the state-mandated filing deadline. The dependent variable in the regression (LATE) was coded 0 if the compilation was filed in a timely manner and 1 if the compilation was filed beyond the state-mandated one-year filing deadline. Table 25 presents the results of the logistic regression.

The coefficients indicate that the overall model was significant ( $\chi^2 = 16.04$ ,  $p = 0.007$ ), and the Hosmer and Lemeshow test indicates goodness of fit ( $\chi^2 = 6.99$ ,  $p = 0.537$ ). The model was able to correctly classify 97 percent of government entities that filed audits in a timely manner and 27 percent of those that filed late, for an overall success rate of 75 percent. The model had a Cox & Snell  $R^2$  of 0.113, a Nagelkerke  $R^2$  of 0.159, and a McFadden's  $R^2$  of 0.097. The following sections discuss the results of the OLS regression and the logistic regression based on hypothesis grouping:

#### *Report Message Content and Managerial Competency—Findings*

Hypothesis 9a predicts that the total number of findings issued on the compilation report will be positively associated with compilation report delay. FINDINGS was positive and

**Table 24: Results of Ordinary Least Squares Regression of Delay: Compilation Engagements**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.276	0.180	29.305	<0.001
<i>Report Message Content and Managerial Competency:</i>					
<b>FINDINGS</b>	+	<b>0.115</b>	<b>0.040</b>	<b>2.854</b>	<b>0.003</b>
<i>Accountability:</i>					
DEBT (millions)	-	0.185	0.106	1.737	0.543
<i>Audit Environment:</i>					
FUNDS	+	0.000	0.055	-0.001	0.999
<b>DISTANCE (hundreds)</b>	+	<b>0.397</b>	<b>0.202</b>	<b>1.963</b>	<b>0.026</b>
<b>EXPERTISE</b>	±	<b>-0.018</b>	<b>0.010</b>	<b>-1.820</b>	<b>0.071</b>

<sup>a</sup> See Table 3 for a description of the variables

n	134
Model F-statistic	4.203
Prob (F-statistic)	0.001
R <sup>2</sup>	0.141
Adjusted R <sup>2</sup>	0.107

*Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.*

**Table 25: Logistic Regression Results Showing Factors Contributing to Late Filings of Compilation Engagements**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		-1.482	0.624	5.637	0.018	0.227
<i>Report Message Content and Managerial Competency:</i>						
<b>FINDINGS</b>	+	<b>0.427</b>	<b>0.148</b>	<b>8.373</b>	<b>0.002</b>	<b>1.533</b>
<i>Accountability:</i>						
DEBT (millions)	-	0.094	0.358	0.069	0.604	1.099
<i>Audit Environment:</i>						
FUNDS	+	0.111	0.182	0.369	0.544	1.117
<b>DISTANCE (hundreds)</b>	+	<b>0.897</b>	<b>0.672</b>	<b>1.782</b>	<b>0.091</b>	<b>2.452</b>
EXPERTISE	±	-0.062	0.041	2.335	0.127	0.940

<sup>a</sup> See Table 3 for a description of the variables

n	134
$\chi^2$	16.040, p=0.007
Cox & Snell R <sup>2</sup>	0.113
Nagelkerke R <sup>2</sup>	0.159
McFadden's R <sup>2</sup>	0.097

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.



significant ( $p = 0.002$ , one-tailed) with respect to compilation report delay (Table 24). This is consistent with the OLS results for full-scope audits. Hypothesis 9a is supported.

Hypothesis 9b predicts that a higher number of reported findings will be associated with compilation reports failing to meet state-mandated filing deadlines. The results of the logistic regression analysis provides evidence that findings are significantly associated with compilation reports that are not filed in a timely manner ( $p = 0.003$ , one-tailed) (Table 25). For each one-unit increase in the number of audit findings, the odds of a late compilation increase by 1.533. Hypothesis 9b is supported.

#### *Accountability—Long-Term Debt*

Hypothesis 10a predicts that the amount of bonded or other long-term indebtedness will lead to decreased compilation report delay. For full-scope audits in this study, the coefficient for the variable DEBT was in the direction predicted but was not found to be significantly associated with decreased audit report delay. For compilations, the coefficient for the variable DEBT is in the opposite direction than was predicted (Table 24). Hypothesis 10a is not supported.

Hypothesis 10b predicts that a higher amount of long-term debt will be associated with governments that file timely financial reports with the state. For full-scope audits in this study, results of the logistic regression provided some evidence that DEBT is associated with timely financial statements. For compilation engagements, however, the coefficient for DEBT is in the opposite direction than was predicted (Table 25). Hypothesis 10b is not supported.

### *Environment—Funds*

Hypothesis 11a predicts that the total number of reported funds will increase compilation report delay. FUNDS is defined as the total number of funds reported on the government's financial statements. The results of the OLS regression indicate that the total number of reported funds is not significantly associated with longer compilation report delay (Table 24). Hypothesis 11a is not supported.

Hypothesis 11b predicts that a higher number of reported funds will be associated with compilations filed beyond the state-mandated filing deadline. Results of the logistic regression indicate that FUNDS is not significantly associated with untimely financial reporting (Table 25). Hypothesis 11b is not supported.

### *Audit Environment—Travel Distance*

Hypothesis 12a predicts that a greater total travel distance (DISTANCE) between the auditor's office and the compilation client's office will be associated with longer compilation report delays. The results of the OLS regression provide evidence that as the mileage traveled increases, so does the amount of delay in filing the compiled financial statements ( $p=0.026$ , one-tailed) (Table 24). Hypothesis 12a is supported.

Hypothesis 12b predicts that a greater travel distance between the auditor and the compilation client will be associated with audit reports failing to meet state-mandated filing deadlines. The results of the logistic regression provide some evidence that greater travel distance is associated with untimely financial statement reports ( $p=0.091$ , one-tailed) (Table 25). This provides some support for Hypothesis 12b.

### *Audit Environment—Auditor Expertise*

Hypothesis 13a predicts that the total number of governmental attestation engagements performed by an audit firm (EXPERTISE) will be associated with compilation report delay. Regression results provide some support that auditor expertise, as measured by the total number of clients, is negatively associated with compilation report delay ( $p=0.071$ , two-tailed) (Table 24).

Hypothesis 13b predicts that the total number of governmental audit and attestation engagements performed by the audit firm will be associated with whether compilation reports meet state-mandated audit-filing deadlines. The results of the logistic regression indicate no significant relationship between the number of audit clients and timely financial reporting (Table 25). Hypothesis 13b is not supported.

### **Additional Procedures—Compilation Engagements**

#### *Travel Distance*

Regarding the DISTANCE variable, it is reasonable to assume that the amount of auditor procrastination due to travel considerations might be more pronounced for auditors having multiple governmental audit clients. As such, the OLS and logistic regressions were recomputed after omitting all observations from the sample that had auditors with only one governmental attestation client in fiscal-year 2007. This reduces the sample to 117 observations. For this reduced sample, the mean total travel distance between the auditor's office and the audit client's office was 29.60 miles. For governmental entities that filed timely audits, the mean travel distance was 25.96 miles. For governmental entities that filed late audits, the mean travel

**Table 26: OLS Regression Results Providing Further Evidence on How Travel Distance Contributes to Delay of Compilation Engagements**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.192	0.191	27.124	<0.001
<i>Report Message Content and Managerial Competency:</i>					
<b>FINDINGS</b>	+	<b>0.117</b>	<b>0.040</b>	<b>2.899</b>	<b>0.003</b>
<i>Accountability:</i>					
DEBT (millions)	-	0.179	0.105	1.710	0.955
<i>Audit Environment:</i>					
FUNDS	+	0.019	0.055	0.346	0.730
<b>DISTANCE (hundreds)</b>	+	<b>0.414</b>	<b>0.200</b>	<b>2.068</b>	<b>0.021</b>
EXPERTISE	±	-0.016	0.010	-11.619	0.108

<sup>a</sup> See Table 3 for a description of the variables

n 117

Model F-statistic 4.434

Prob (F-statistic) 0.001

R<sup>2</sup> 0.166

Adjusted R<sup>2</sup> 0.129

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

**Table 27: Logistic Regression Results Providing Further Evidence on How Travel Distance Contributes to Late Filings of Compilation Reports**

Variables <sup>a</sup>	Predicted Sign	$\beta$	Standard Error	Wald's $\chi^2$	p-value	Exp( $\beta$ )
Intercept		-1.398	0.679	4.237	0.04	0.247
<i>Report Message Content and Managerial Competency:</i>						
<b>FINDINGS</b>	+	<b>0.400</b>	<b>0.152</b>	<b>6.935</b>	<b>0.004</b>	<b>1.492</b>
<i>Accountability:</i>						
DEBT (millions)	-	0.072	0.360	0.040	0.580	1.075
<i>Audit Environment:</i>						
FUNDS	+	0.134	0.187	0.511	0.238	1.143
<b>DISTANCE (hundreds)</b>	+	<b>0.906</b>	<b>0.680</b>	<b>1.777</b>	<b>0.092</b>	<b>2.474</b>
<b>EXPERTISE</b>	±	<b>-0.073</b>	<b>0.045</b>	<b>2.719</b>	<b>0.099</b>	<b>0.929</b>

<sup>a</sup> See Table 3 for a description of the variables

N	117
$\chi^2$	15.059, p=0.01
Cox & Snell R <sup>2</sup>	0.121
Nagelkerke R <sup>2</sup>	0.169
McFadden's R <sup>2</sup>	0.103

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.

distance was 37.46 miles. The results of the OLS regression are presented in Table 26, and the results of the logistic regression are presented in Table 27.

The results of the regressions on this reduced sample are similar to the results of the regressions on the full sample of compilation engagements. Again, the results of the OLS regression provide evidence of a positive relationship between DISTANCE and DELAY ( $p=0.021$ , one-tailed). The logistic regression model again provides some evidence that DISTANCE is associated with compilations that are filed after the deadline ( $p=0.092$ , one-tailed).

#### *Auditor Expertise*

Payne & Jenson (2002) measured auditor expertise with an indicator variable coded 1 if the auditor performed two or more municipal audits within their sample and 0 otherwise. The results of their study provided evidence that as the number of municipal audit clients increases, the audit report delay decreases. To remain consistent with this previous study, the OLS regression and logistic regression were recomputed after expressing the EXPERTISE variable as a categorical variable coded 1 for audit firms that performed more than one governmental audit or attestation engagement during the year and 0 otherwise. The results (not tabulated) provided no further evidence that the number of government attestation clients was significantly associated with audit report delay or timely compilations.

#### *Funds*

Payne & Jenson (2002) included an indicator variable coded 0 if the entity reported three or fewer funds and 1 if the entity reported more than three funds. Their results provided no

evidence of a significant relationship between the total number of reported funds and audit report delay. To approach this area in a way that is consistent with prior research, the FUNDS variable in this study was redefined in a way similar to Payne & Jenson (2002). The variable was expressed as a categorical variable with 0 indicating three or fewer reported major funds and 1 indicating greater than three reported major funds. The results (not tabulated) provided no further evidence that the number of funds is significantly associated with audit report delay or timely compilations.

#### *A Different Measure of DELAY*

For purposes of comparison, the OLS model from this study of compilation engagements was examined after re-defining DELAY as the number of days between the entity's fiscal year end and the date on the audit report. Results of the OLS regression are presented in Table 28. In this model, the variables FINDINGS and DISTANCE remain significant and in the predicted direction. The most striking difference occurs with the EXPERTISE variable. In the original model (Table 24), this variable was only marginally significant ( $p=0.071$ , two-tailed). In the model with DELAY redefined (Table 28), EXPERTISE is statistically significant ( $p=0.023$ , two-tailed) and associated with decreased delay between fiscal year end and the date on the audit report. A comparison of the two models provides evidence that different findings may occur depending on how DELAY is measured in the model.

The analyses in this study indicate that the areas of report message content and managerial competency, accountability, and the audit environment may have a significant impact on both the timing and the timeliness of the audit or compilation report. The following chapter discusses each variable considered in the study as well as the effect of each variable on audit and

**Table 28: Results of Ordinary Least Squares Regression of Delay for Compilation Engagements; DELAY Measured by Date on Compilation Report**

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t-statistic	p-value
Intercept		5.031	0.221	22.805	<0.001
<i>Report Message Content and Managerial Competency:</i>					
<b>FINDINGS</b>	+	<b>0.131</b>	<b>0.049</b>	<b>2.672</b>	<b>0.005</b>
<i>Accountability:</i>					
DEBT (millions)	-	0.238	0.130	1.825	0.965
<i>Audit Environment:</i>					
FUNDS	+	-0.027	0.067	-0.401	0.656
<b>DISTANCE (hundreds)</b>	+	<b>0.513</b>	<b>0.248</b>	<b>2.069</b>	<b>0.021</b>
<b>EXPERTISE</b>	±	<b>-0.028</b>	<b>0.012</b>	<b>-2.298</b>	<b>0.023</b>

<sup>a</sup> See Table 3 for a description of the variables

N 134

Model F-statistic 4.405

Prob (F-statistic) 0.001

R<sup>2</sup> 0.147

Adjusted R<sup>2</sup> 0.113

Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.



compilation report timing and timeliness. The implications of these findings are discussed along with potential limitations of the study and possible avenues for future research.

## **CHAPTER V – CONCLUSIONS AND LIMITATIONS**

The timeliness of audited financial statements for local governmental entities is of primary interest to many parties, and for those reports to be relevant, they must be prepared and made available to the public in a timely manner. For local governmental entities, audited financial statements are the primary means for communicating the results of operations and financial position to outside parties. The auditor's report also provides important information about the management of the government, such as the adequacy of internal controls and compliance with laws and regulations.

Some smaller governmental entities prepare compiled financial statements that are, in lieu of a full-scope audit, subject to an independent auditor's performance of certain agreed-upon procedures, such as confirmation of cash balances, verification of tax collections, and examination of compliance with purchasing requirements. Like full-scope audits, these compilation reports are the primary means for communicating information about the management of the government. To be relevant to interested users, these reports must also be prepared and made available to the public in a timely manner.

In Mississippi, timely completion of county and municipal audits and compilations has become an important issue in the state, and new steps have been taken to help ensure that future timeliness will be enhanced. This study examined what variables influence audit and compilation delay for local governments in Mississippi. Since the Mississippi Code provides a one-year deadline for submission of the completed audits to the state auditor, this study also

considered the determinants of late audit and compilation report filings in Mississippi and what variables differ between governments that file audits or compilations late versus governments that file audits or compilations in a timely manner. The research questions addressed in this study were chosen based on the anticipated impact on audit or compilation report timeliness of (1) report message content and managerial competency, (2) accountability, and (3) the audit environment. This chapter summarizes and discusses the findings of each of the 13 research questions addressed in this study, the limitations inherent in the study, and suggestions for possible future research.

### **Summary of the Findings**

#### *Research Question 1—Financial Statement Position and Performance Ratios*

Research Question 1 addressed whether the financial report message, as evidenced by key financial statement ratios, are a significant predictor of audit report delay and audit reports meeting or failing to meet state-mandated filing deadlines. The key financial statement ratios considered in this study included a measure of financial statement position (defined as Total Net Assets / Total Revenues) and a measure of financial performance (defined as Change in Net Assets / Total Net Assets). It was hypothesized that favorable financial statement ratios would represent good news that the governmental entity would desire be made public more quickly. The results, however, were somewhat mixed.

Evidence from this study does not support that the governmental entity's favorable financial statement position is linked with either audit delay or timely audits. The financial statement position of the governmental entity was only a marginally significant predictor of

decreased audit delay and timely audits, and this marginal significance occurred only in regression models that included municipalities and not counties.

The findings concerning the performance ratios were somewhat surprising. A favorable performance ratio was not associated with decreased audit delay or with timely audits. In contrast, the evidence pointed toward favorable government performance being linked with increased audit delay and untimely audit reports. However, this positive relationship was strongest in a model that included an outlying observation. This positive relationship was also noticeable in a regression model that defined audit delay as the number of days from the governmental entity's fiscal year end to the date on the audit report, rather than the number of days to the date in which the state auditor's office received the audit report. Notwithstanding the inconsistencies regarding the dates in which auditors date audit reports, this could indicate that a strong performance ratio might increase the auditor's assessment of audit risk on the engagement, thus delaying the audit process with the gathering of additional evidence.

The effect of financial statement position and performance ratios has not been addressed in prior studies of governmental audit delay. The interesting findings from this study indicate that future research in this area is warranted.

#### *Research Questions 2 and 9—Audit Findings*

Research Question 2 addressed whether the total number of reported audit findings was a significant predictor of audit report delay and of audit reports meeting or failing to meet state-mandated filing deadlines. Research Question 9 addressed the same concern as it applies to compilation engagements. The effect of audit findings has previously been unexplored in the area of audit delay in local governments. The results of this study provide strong evidence that

audit findings are associated with both increased audit delay and with untimely audits. The total number of findings was also found to be significantly associated with increased compilation report delay as well as untimely compilations.

Reasons for this result could be due to a large number of audit findings being perceived as bad news, thus providing incentive for the governmental entity to delay reporting. A large number of findings could also be an indication of less competent management, which could delay the audit process for many reasons, such as the auditor not being able to obtain needed records because they are either incomplete or poorly executed and maintained. Findings could also be issued as a result of the discovery of inadequate internal controls, for which the auditor will, as a result, be required to perform additional procedures.

Further analysis was performed on the effect of the materiality of audit findings on audit timeliness. Findings classified by the auditor as material weaknesses were significantly associated with audit delay but were only marginally significantly associated with late audits. Models including only findings not classified as material weaknesses revealed that these findings were significantly associated with both total audit delay and late audits. These results, taken as a whole, indicate that the quantity of audit findings have a greater effect on timeliness than does the magnitude of those findings. In other words, a larger number of problem areas appears to slow the audit process more than a smaller number of problem areas, regardless of the materiality of those problems.

### *Research Question 3—Audit Opinion*

Research Question 3 addressed whether a qualified or adverse audit opinion is a significant predictor of audit report delay and audit reports meeting or failing to meet state-

mandated filing deadlines. Prior research of audit delay in for-profit entities has yielded strong results indicating that an other-than-unqualified audit opinion is associated with longer delays in the audit process. Also, Carslaw et al. (2007), in a study of audit delay in school-districts, found that an other-than-unqualified audit opinion is associated with longer delays in four of the five years analyzed. Prior research of municipal and county audit delay, however, has been somewhat mixed. Of the prior studies of county and municipal audit delay, only Payne & Jenson (2002) found that an other-than-unqualified audit opinion is significantly associated with increased audit report delay. Three other studies, Dwyer & Wilson (1989), Rubin (1992), and McLelland & Giroux (2000), did not find that the audit opinion was significantly associated with audit delay.

The results of this study indicate that an adverse or qualified audit opinion has a strong relationship with longer delays in the audit process and with untimely audits, thus supporting the findings of Payne & Jenson (2002). This finding was consistent across all models analyzed in the study. There are several possible reasons for this relationship. Bamber et al. (1993) suggests that qualified opinions are not likely to be issued until after the auditor has spent considerable time and effort pursuing additional audit procedures and other reporting alternatives in an effort to avoid qualification. Also, an adverse or qualified audit opinion could be perceived as bad news, thus providing the governmental entity incentive to delay reporting. The opinion could also be issued as a result of missing or incomplete records for which considerable time was spent during the audit process in an attempt to locate or have completed.

### *Research Questions 4 and 10—Long-Term Debt*

Research Question 4 addressed whether the amount of bonded and other long-term indebtedness is a significant predictor of audit report delay and audit reports meeting or failing to meet state-mandated filing deadlines. Research Question 10 addressed the same concern as it relates to compilation engagements. It was predicted that the increased accountability to creditors would result in decreased audit delay and timely filed reports. The results of the study provided no evidence that magnitude of debt is associated with decreased audit delay. However, the results show a marginally significant ( $p=0.06$ ) association of DEBT with audits that were filed on time. Regarding compilation engagements, DEBT had no significant association with shorter audit delay or with timely audits.

The result regarding the effect of long-term debt on full-scope audit engagements is interesting. As the magnitude of debt increases, this does not lead to shorter audit delays. However, governmental entities carrying larger amounts of long-term debt typically manage to submit their audited financial statements to the state auditor before the deadline. This result is likely due to the creditors' expectations of timely information regarding the government's ability to make payments on debt when they become due and to assess the government's long-term debt-paying ability. This has important implications in that it appears that either the auditor or the governmental entity are making a conscious effort to complete certain audits (i.e. ones in which the governmental entities have added accountability to creditors) in a timely manner.

### *Research Question 5—Single Audit Act*

Research Question 5 addressed whether the earlier filing deadline required under the Single Audit Act is a significant predictor of audit report delay and audit reports meeting or failing to meet state-mandated filing deadlines. Results of the study provided no evidence that these earlier deadlines affect audit delay or audit timeliness. Only approximately one-fourth of the entities in the sample requiring a Single Audit actually submitted the required Single Audit reports within the nine-month deadline. The majority of those entities also managed to submit audit reports to the state auditor in a timely manner. However, the fact that almost three-fourths of the entities in the sample filed late Single Audit reports allows one to deduce that if the earlier filing requirements of the Single Audit reports do not affect the timeliness of those Single Audit reports, they will neither have an effect of decreasing the timing of the full-scope audit reports that are to be submitted to the state auditor. This is, however, a complex area in which further research is warranted.

### *Research Questions 6 and 11—Reported Funds*

Research Question 6 addressed whether the number of major funds reported in the government's financial statements is a significant predictor of audit report delay and audit reports meeting or failing to meet state-mandated filing deadlines. Research Question 11 addressed the same concern as it relates to compilation engagements. Payne & Jenson (2002) is the only study of governmental audit delay that examined the effect of the number of funds on report timing. No significant relationship was observed in that study. Those results, however, were based on data prior to GASB Statement No. 34, which required the identification and reporting of only major funds. This study addresses whether funds defined as major funds have



an impact on audit timeliness. Similar to the findings of Payne & Jenson (2002), no evidence was observed that the number of major funds was associated with longer audit delay or late audits. This result was also observed for compilation engagements.

Payne & Jenson (2004) defined the number of funds as a categorical variable, coded 1 if the government reported more than three funds and 0 otherwise. The results from the current study are based on defining the variable as the total number of reported funds. As an additional procedure, the FUNDS variable was re-defined consistent with Payne & Jenson (2002). This resulted in FUNDS being only marginally significantly associated with late audits but not significantly associated with total audit delay. Based on the evidence, the number of reported funds appears to have little impact on audit timeliness.

#### *Research Questions 7 and 12—Travel Distance*

Research Question 7 addressed whether the travel distance between the auditor's office and the audit client's office is a significant predictor of audit report delay and audit reports meeting or failing to meet state-mandated filing deadlines. Research Question 12 addressed the same concern as it relates to compilation engagements. This area is previously unexplored in studies of governmental audit delay.

For full-scope audit engagements, greater travel distance has no significant association with the length of time to complete the audit. Greater travel distance is, however, marginally significant with regard to late audits. This relationship becomes much more pronounced when audit firms with only one governmental attestation client are removed from the sample. This provides some indication that audit firms might have an element of procrastination regarding clients that require more travel time, especially when they have other audit clients that are closer

in proximity. This finding could also be indicative of auditors wishing to ensure that the audits of the county or municipality in which they reside be completed in a more timely manner, whether it be due to pressure from the local government officials or the auditor's desire to maintain a personal image in his or her own hometown.

The effect of travel distance on the timing of the attestation engagement appears to play a much more important role in compilation engagements. Greater travel distance was found to be significantly associated with longer delays in the compilation engagement and marginally significantly associated with late compilation reports. This same result was observed when audit firms with only one governmental attestation client are removed from the sample.

#### *Research Questions 8 and 13—Auditor Expertise*

Research Question 8 addressed whether the total number of governmental attestation engagements performed by the audit firm is a significant predictor of audit report delay and audit reports meeting or failing to meet state-mandated filing deadlines. Research Question 13 addressed the same concern as it relates to compilation engagements. No directional prediction was made regarding this variable since while auditor expertise should result in a more efficient audit, numerous attestation clients with the same due date necessarily results in longer delays for some engagements because of the increased workload.

Results from the study provide little evidence that auditor expertise, as measured by the number of governmental attestation clients, has an association with audit timeliness. This result is likely a result of the offsetting effect of expertise with increased workload as previously discussed. With compilation engagements, a marginal association with shorter delay was observed.

## **Implications**

Full-scope audits of governmental entities are complex, and many factors affect the timing and timeliness of those audits. The overall results from this study indicate that report message content and managerial competency have an important effect on audit delay. Specifically, a greater number of audit findings and the issuance of a qualified or adverse audit opinion result in longer delays and later audits.

There are a number of actions governments can take to improve the timeliness of their audits. Governments wishing to obtain a more timely audit should take steps to ensure that past audit findings are corrected as soon as possible. Corrections of internal control findings would result in less risk assessment by the auditor in future audits. Corrections of findings regarding insufficient records would result in a more efficient audit in the future. Fewer reported audit findings coupled with an unqualified audit opinion would be perceived as good news by the governmental entity, and that entity would have incentive to accelerate the reporting of that news.

Compilation engagements involve the audit firm performing certain agreed-upon procedures with regard to the governmental entity's financial operations. These agreed-upon procedures are uniform, and all compilation reports observed in the sample were consistent in format. With each compilation engagement appearing to be of relatively equal complexity, it appears that audit firms are quicker to complete compilation engagements that require relatively less travel distance and engagements in which fewer findings are reported. Governments wishing to obtain a more timely compilation might consider choosing an audit firm that is in closer proximity to the government's offices. Also, as with governments wishing to obtain a

more timely full-scope audit, it is important for compilation clients to correct reported findings as soon as possible.

To corroborate the implications of these findings, an auditor from a Mississippi CPA firm in this sample was contacted by telephone. That auditor indicated that “messier” audits are the ones that take the longest to complete. “Messier” audits include those in which records are missing, bank reconciliations are not completed, and fixed assets are not properly recorded, among other things—all of which would involve an audit finding issued on the report. The auditor was from a firm that has several governmental audit clients, and he responded in the affirmative when questioned concerning whether travel distance tends to play a role as to which audits are completed first. The auditor cited one particular client in which their records were in “terrible shape” and the travel distance was much greater than any of their other clients. Upon further analysis, the researcher determined that the particular governmental entity had a total audit report delay in fiscal-year 2007 of greater than 850 days.

### **Limitations**

The results of this study are subject to some important limitations. The sample for this study was not randomly obtained but instead uses data from counties and municipalities from one state. As such, caution should be used in generalizing these results to other geographic regions. Also, the smaller populations of the observations in this study are not comparable to the larger populations of the samples examined in prior studies. Since this study examines several variables not addressed in prior studies, the findings regarding those variables may not be generalizable to entities with larger populations. Also, at the time of data collection, there still existed some governmental entities in Mississippi that had yet to file an audited or compiled

financial report to the Office of the State Auditor, and these extreme cases might have had an influential effect on the results.

In logistic regression, a rule of thumb states that about ten events per variable are necessary in order to get reasonably stable estimates of the regression coefficients (Peduzzi et al. 1996). The logistic regression model for full-scope-audit entities in the study has about seven events per variable. Although more recent research has concluded that the “Rule of Ten” can be relaxed (Vittinghoff & McCulloch 2006), an increased sample size in this study could have possibly led to different conclusions.

Finally, the explanatory power of the OLS model for the full-scope-audit entities in this study compares quite favorably to the models used in prior studies. The explanatory model of the OLS model for compilation entities, however, is weaker in comparison. Future research will be warranted to gain a better understanding of those areas that influence delay for these types of engagements.

### **Future Research**

This is the first study to consider the timeliness of governmental compilation engagements. As previously mentioned, the explanatory model of the OLS model for compilation engagements is weaker in comparison to the OLS model for full-scope audit engagements. Future research should consider additional variables that might affect the timeliness of this type of engagement. Also, given that the dependent variable is a time-to-event variable, another statistical approach other than OLS regression, such as survival analysis, might be used to analyze the data.

Also, the smaller populations of the observations in this study are not comparable to the larger populations of the samples examined in prior studies. Since this study examines several variables not addressed in prior studies, future research might address the effect of these variables on larger entities to gain a better understanding of their overall effect on audit timeliness.

The findings in this study regarding the effect of financial statement position and performance ratios were mixed. In the case of the performance ratio, the effect on audit timeliness was opposite of that expected. Future research could examine these ratios as well as other financial statement ratios and their effects on audit timeliness.

The expectation that the earlier filing deadline for Single Audit reports would result in shorter audit delay was not observed in this study. A deeper analysis revealed that only one-fourth of the entities in the sample filed Single Audit reports before the deadline. A future study might examine factors that affect delay in filing the required Single Audit reports.

Finally, this study captures data in Mississippi prior to the state's enactment of rules that establish ramifications for late audits filed after 2010. As such, the findings from this study will provide a reference point for a future study concerning the successfulness of these steps after they have been instituted in Mississippi. This study is an important first step in determining whether "the goal of increasing the availability of timely information has been hampered by the absence of a filing deadline" (NFMA 1998).

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## **APPENDIX**

## Sample Compilation and Agreed-upon Procedures Report



The following document was not prepared by the Office of the State Auditor, but was prepared by and submitted to the Office of the State Auditor by a private CPA firm. The document was placed on this web page as it was submitted. The Office of the State Auditor assumes no responsibility for its content or for any errors located in the document. Any questions of accuracy or authenticity concerning this document should be submitted to the CPA firm that prepared the document. The name and address of the CPA firm appears in the document.

FINANCIAL STATEMENTS  
Town of Tremont, Mississippi  
For the Year Ended  
September 30, 2007

**RECEIVED**  
DEC 01 2008  
**STATE AUDITOR'S OFFICE**

Franks, Franks & Jarrell, P.A.  
Certified Public Accountants

**TOWN OF TREMONT, MISSISSIPPI**  
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September 30, 2007

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OFFICES LOCATED IN

TUPELO, FULTON & AMORY

MEMBERS OF THE

AICPA, MSCPA & PCPS

**ACCOUNTANTS' REPORT ON AGREED-UPON PROCEDURES**

Honorable Mayor and Board of Aldermen  
Town of Tremont, Mississippi

We have applied certain agreed-upon procedures, as discussed below, to the accounting records of the Town of Tremont, Mississippi, as of September 30, 2007, and for the year then ended, as required by the Office of the State Auditor, under the provisions of Section 21-35-31, Miss. Code Ann. (1972). It is understood the report is solely for the use of the governing body of the Town of Tremont, Mississippi, and the Office of the State Auditor and should not be used for any other purposes. Our procedures and findings are as follows:

1. We reconciled cash on deposit with the following banks to balances in the respective general ledger accounts and obtained confirmation of the related balances from the banks:

<u>Bank</u>	<u>Fund</u>	<u>Balance Per General Ledger</u>
Trustmark National Bank	General Fund	\$ 2,414
Trustmark National Bank	General Fund	12,338
Trustmark National Bank	General Fund	25
Trustmark National Bank	General Fund	<u>28,824</u>
Total General Fund		<u>\$ 43,601</u>
Trustmark National Bank	Proprietary Fund	\$ 15,189
Trustmark National Bank	Proprietary Fund	<u>25,726</u>
Total Proprietary Fund		<u>\$ 40,915</u>

2. The Town of Tremont did not levy any real or personal property taxes during the fiscal year.
3. We obtained a statement of payments made by the Mississippi Department of Finance and Administration to the municipality. Payments indicated were traced to deposit in the respective bank accounts and recorded in the general ledger with no exceptions. Payments traced were as follows:

<u>Purpose</u>	<u>Receiving Fund</u>	<u>Amount</u>
Sales Tax Allocation	General Fund	\$ 26,498
Gasoline Tax	General Fund	1,074
TVA In Lieu	General Fund	4,239
Municipal Aid	General Fund	203
Fire Protection Allocation	General Fund	1,846



4. We selected a sample of purchases made by the municipality during the fiscal year. Each sample item was evaluated for compliance with requirements set forth in Title 31 Chapter 7, Miss. Code Ann. (1972), as applicable.

The sample consisted of the following:

Number of Sample Items	40
Dollar Value of Sample	\$ 9,610

We found the municipality's purchasing procedures to be in agreement with the requirements of the above mentioned sections except as follows:

We noted four of the forty cash disbursements sampled did not have proper documentation supporting the disbursement.

5. We have read the Municipal Compliance Questionnaire completed by the Town. The following responses to the questionnaire indicate the following noncompliance with state requirements:

The Town did not complete and adopt the Municipal Compliance Questionnaire in accordance with the timeframe specified by the Municipal Audit and Accounting Guide. Pursuant to Section IV-B5 of the Municipal Audit and Accounting Guide, the Municipal Compliance Questionnaire should be completed at the end of the municipality's fiscal year and entered into the official minutes at the next regular meeting.

The Town is not in compliance with Section 7-7-211 of the Municipal Audit and Accounting Guide, as the fixed assets are not properly accounted for. The Town does not maintain a fixed asset inventory listing, take a fixed asset inventory, or tag fixed assets.

The quarterly report from the State Treasurer's office as of September 30, 2007 did not reflect all accounts of the Town. This resulted in the Town's deposits not being properly and adequately collateralized by securities or instruments on September 30, 2007 in the amount of \$25,575 (Sections 27-105-5 and 27-105-6 – Municipal Audit and Accounting Guide).

Because the above procedures do not constitute an audit conducted in accordance with generally accepted auditing standards, we do not express an opinion on any of the specific accounts or classes of transactions referred to above. In connection with the procedures referred to above, no matters came to our attention that caused us to believe that the items specified in the proceeding paragraphs should be adjusted. Had we performed additional procedures or had we conducted an audit of the financial statements in accordance with generally accepted auditing standards, matters might have come to our attention that would have been reported to you. This report should not be associated with the financial statements of the Town of Tremont, Mississippi, for the year ended September 30, 2007.

*Franks, Franks + Jarrell, P.A.*

Franks, Franks & Jarrell, P.A.  
June 18, 2008

## ACCOUNTANTS' COMPILATION REPORT

Honorable Mayor and Board of Aldermen  
Town of Tremont  
Tremont, Mississippi

We have compiled the accompanying statement of cash receipts and disbursements - all fund types of the Town of Tremont, Mississippi, for the year ended September 30, 2007, in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants.

A compilation is limited to presenting in the form of financial statements information that is the representation of the Town's officials. We have not audited or reviewed the accompanying statement of cash receipts and disbursements - all fund types and, accordingly, do not express an opinion or any other form of assurance on it.

The Town's policy is to prepare its financial statements on the basis of cash receipts and disbursements; consequently, certain revenue is recognized when received rather than when measurable and available, and certain expenditures are recognized when paid rather than when the obligation is incurred. Accordingly, the statement of cash receipts and disbursements - all fund types is not intended to present results of operations, in conformity with generally accepted accounting principles.

The Town's management has elected to omit substantially all of the disclosures required by generally accepted accounting principles. If the omitted disclosures were included in the financial statements, they might influence the user's conclusions about the Town's cash receipts and disbursements. Accordingly, this financial statement is not designed for those who are not informed about such matters.

The supplementary information contained on pages 6 through 8 is presented for purposes of additional analysis and has been compiled by us from information that is the representation of the officials of the Town of Tremont, Mississippi, without audit or review. Accordingly, we do not express an opinion or any other form of assurance on such supplementary information.

*Franks, Franks & Jarrell, P.A.*

Franks, Franks & Jarrell, P. A.  
June 18, 2008

**TOWN OF TREMONT, MISSISSIPPI**  
**STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS - ALL FUND TYPES**  
For the year ended September 30, 2007

	<u>Governmental</u> <u>Funds</u>	<u>Proprietary</u> <u>Fund</u>	<u>Totals</u> <u>(Memorandum</u> <u>Only)</u>
<b><u>CASH RECEIPTS</u></b>			
Franchise Tax on Utilities	\$ 6,690	\$	\$ 6,690
<b>Intergovernmental Revenues:</b>			
Sales Tax	26,498		26,498
Gasoline Tax	1,074		1,074
General Municipal Aid	203		203
TVA Tax - State	4,239		4,239
Fire Protection	1,846		1,846
<b>Charges for Services:</b>			
Water System		97,126	97,126
Natural Gas		98,570	98,570
<b>Other Receipts:</b>			
Interest Income	2,178	268	2,446
Privilege Taxes	775		775
Other Income	2,409		2,409
Total Cash Receipts	45,912	195,964	241,876
Cash Balance - Beginning of Year	36,905	62,948	99,853
TOTAL AMOUNT TO ACCOUNT FOR	\$ 82,817	\$ 258,912	\$ 341,729
<b><u>CASH OPERATING DISBURSEMENTS</u></b>			
General Administration and Finance	\$ 30,283	\$	\$ 30,283
Public Safety: Police	7,222		7,222
Culture and Recreation: Park	479		479
Enterprise: Water		78,624	78,624
Enterprise: Gas		82,024	82,024
Total Cash Operating Disbursements	37,984	160,648	198,632
<b>Other Disbursements:</b>			
<b>Loans Repaid:</b>			
<b>Farmer's Home Administration:</b>			
Principal		13,981	13,981
Interest		44,600	44,600
Transfers	1,232	(1,232)	0
Total Other Cash Disbursements	1,232	57,349	58,581
Total Cash Disbursements	39,216	217,997	257,213
Cash Balance - End of Year	43,601	40,915	84,516
TOTAL AMOUNT ACCOUNTED FOR	\$ 82,817	\$ 258,912	\$ 341,729

See accompanying selected information and accountants' compilation report



**Town of Tremont, Mississippi**  
**SELECTED INFORMATION-Substantially all disclosures required**  
**by generally accepted accounting principles are not included**  
**September 30, 2007**

**NOTE A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

General Information

The Town operates under the mayor/board of aldermen form of government and provides services as authorized by law.

Reporting Entity

The financial statement of the Town includes all the funds of the Town.

Fund Accounting

The accounts of the Town are organized on the basis of funds, each of which is considered a separate accounting entity.

Basis of Accounting

The financial statement has been prepared on the cash receipts and disbursements basis, as prescribed by the Office of the State Auditor. Consequently, certain revenues are recognized when received rather than when earned and certain expenses are recognized when paid rather than when the obligation is incurred.

**NOTE B - REPORT CLASSIFICATIONS**

Receipts and disbursements were classified according to requirements for small towns in the state of Mississippi as prescribed by the Office of the State Auditor.

**NOTE C - LONG-TERM DEBT**

The annual requirements to amortize all debt outstanding as of September 30, 2007, including interest payments of \$477,983 are as follows:

<u>Fiscal Year Ended</u> <u>September 30,</u>	<u>USDA Rural</u> <u>Development</u>	<u>Interest</u>	<u>Total</u>
2008	25,355	32,533	57,888
2009	21,071	31,282	52,353
2010	22,145	30,207	52,352
2011	22,378	29,086	51,464
2012-2016	92,953	130,595	223,548
2017-2021	106,416	106,746	213,162
2022-2026	136,430	76,733	213,163
2027-2031	174,916	38,246	213,162
2032-2036	<u>64,976</u>	<u>2,555</u>	<u>67,531</u>
	<u>\$ 666,640</u>	<u>\$ 477,983</u>	<u>\$ 1,144,623</u>

The Town does not maintain any debt service funds to service the above notes.

TOWN OF TREMONT, MISSISSIPPI  
SCHEDULE OF INVESTMENTS  
September 30, 2007

GOVERNMENTAL FUND TYPES

General Fund - Certificate of Deposit	\$ <u>28,824</u>
Total Governmental Fund Types	\$ <u><u>28,824</u></u>

PROPRIETARY FUND TYPES

Certificate of Deposit	\$ <u>0</u>
Total Proprietary Fund Types	\$ <u><u>0</u></u>

See accountants' compilation report.

**TOWN OF TREMONT, MISSISSIPPI**  
**SCHEDULE OF SURETY BONDS FOR TOWN OFFICIALS**  
September 30, 2007

Name	Position	Company	Bond
Glyn Robinson	Mayor	Scott Municipal Insurance	\$ 25,000
Windy Abbott	City Clerk	Fulton Insurance	\$ 50,000
Steve Thrasher	Policeman	Fulton Insurance	\$ 50,000
Ricky Roberts	Water Department Supervisor	Fulton Insurance	\$ 20,000
Gary Mabus	Alderman	Scott Municipal Insurance	\$ 5,000
James Cox	Alderman	Scott Municipal Insurance	\$ 5,000
Pamela Dines	Alderman	Scott Municipal Insurance	\$ 5,000
Frankie Keeton	Alderman	Scott Municipal Insurance	\$ 5,000
Everett Cody	Alderman	Scott Municipal Insurance	\$ 5,000

See accountants' compilation report.

**TOWN OF TREMONT, MISSISSIPPI**  
**SCHEDULE OF LONG-TERM DEBT**  
For the year ended September 30, 2007

<u>DEFINITION AND PURPOSE</u>	<u>BALANCE OUTSTANDING September 30, 2006</u>	<u>TRANSACTIONS DURING FISCAL YEAR REDEEMED</u>	<u>TRANSACTIONS DURING FISCAL YEAR ISSUED</u>	<u>BALANCE OUTSTANDING September 30, 2007</u>
<b>Notes Payable:</b>				
Farmer's Home Administration	\$ 43,655	\$ 6,092	\$	\$ 37,563
Farmer's Home Administration	11,183	5,800		5,383
Farmer's Home Administration	6,279	1,300		4,979
Farmer's Home Administration	45,506	789		44,717
Farmer's Home Administration	<u>573,998</u>			<u>573,998</u>
<b>TOTAL</b>	<b>\$ <u>680,621</u></b>	<b>\$ <u>13,981</u></b>	<b>\$ <u>0</u></b>	<b>\$ <u>666,640</u></b>

See accountants' compilation report.

## VITA

**Corey Cagle**  
**cscagle@olemiss.edu**

### **EDUCATION:**

**Master of Accountancy**, University of Tennessee at Martin, 2001.

**B.B.A., Accounting**, Freed-Hardeman University, Henderson, TN, 2000.

### **TEACHING EXPERIENCE:**

**Assistant Professor**, 2012 to present  
University of North Alabama, Florence, AL  
Courses:      Financial Statement Analysis  
                 Cost Accounting  
                 Managerial Accounting

**Graduate Assistantship**, 2007-2011  
University of Mississippi, Oxford, MS  
Courses:      Cost Accounting (four sections)  
                 Financial Accounting  
                 Managerial Accounting (four sections)

**Adjunct Instructor**, 2008  
Itawamba Community College, Tupelo, MS  
Course:        Principles of Statistics

**Adjunct Instructor**, 2006-2007  
Faulkner University, Montgomery, AL (Hamilton, AL Campus)  
Courses:      Financial Management  
                 Managerial Accounting  
                 Survey of Accounting

**Adjunct Instructor**, 2005  
Freed-Hardeman University, Henderson, TN  
Course:        Auditing



## **TEACHING EXPERIENCE (continued):**

### **Visiting Instructor of Accounting and Finance, 2003-2004**

International University of Vienna, Austria

Courses: Intermediate Accounting I  
Intermediate Accounting II  
Managerial Accounting  
Business Mathematics  
Financial Management (two sections)

### **Visiting Instructor of Accounting, 2002-2003**

Lambuth University, Jackson, TN

Courses: Advanced Managerial Accounting  
Intermediate Accounting I  
Intermediate Accounting II  
Cost Accounting (two sections)  
International Accounting  
Managerial Accounting (three sections)  
Financial Accounting (three sections)

## **PROFESSIONAL EXPERIENCE:**

### **Staff Auditor, January 2005-August 2007**

Franks, Franks & Jarrell, CPAs, Tupelo, MS

- Performed audits for governmental, not-for-profit, corporate, and small-business clients.
- Gained experience in conducting audits in accordance with the Single Audit Act.
- Prepared individual and corporate tax returns for a wide variety of clients.

### **Regional Accountant (Temporary Contract), 2004**

St. Jude Children's Research Hospital, Memphis, TN

- Prepared financial statements on a daily basis for the entire fundraising division.
- Worked principally in accounting for the Dream Home fundraisers, which earn \$15 million annually.
- Maintained ledgers and prepared daily or monthly reconciliations for 46 bank accounts.

### **Accountant (Part-time), 2002-2003**

Arrington Funeral Group, Jackson, TN

- Responsible for all monthly accounting for a funeral home.

### **Staff Accountant (Interning), 2000-2001**

Steele, Martin & Associates, CPAs, Jackson, TN

- Completed monthly write-up work and sales tax returns, as well as quarterly federal and state payroll tax returns.
- Converted all client data from ACE Write-UP software to Creative Solutions software and formatted all client financial statements.

## **PROFESSIONAL CERTIFICATIONS:**

Certified Public Accountant, State of Mississippi, March 23, 2007

Certified Management Accountant, November 12, 2007

Certified Financial Manager, December 27, 2007

## **SCHOLARLY ACTIVITIES:**

### ***Refereed Journal Articles:***

“Effective Leadership Found in Unexpected Places: A Sociohistorical Analysis of the Red Tops Dance Orchestra,” (with Milorad M. Novicevic, John H. Humphreys, M. Ronald Buckley, and Foster Roberts), *Business Horizons* 54 (6), November-December 2011, pp. 529-540.

“The Sampling Bias Effects of Fiscal Year-End Restrictions in Archival Accounting Research,” (with Randall B. Bunker), *Journal of Business and Accounting* (Fall 2010), pp. 134-146.

### ***Working Papers:***

“Audit Quality in County Governments: Evidence from Audit Findings,” (with Annette K. Pridgen)

“The Financial and Managerial Success of the Red Tops Dance Orchestra of Vicksburg, Mississippi”

### ***Presentations at Professional Meetings:***

“Audit Quality in County Governments: Evidence from Audit Findings,” (with Annette K. Pridgen), American Accounting Association Annual Meeting, Denver, Colorado (August 9, 2011).

“Audit Quality in County Governments: Evidence from Audit Findings,” (with Annette K. Pridgen), American Accounting Association Government and Nonprofit Section Midyear Conference, Birmingham, Alabama (March 19, 2011).

“The Sampling Bias Effects of Fiscal Year-End Restrictions in Archival Accounting Research” (with Randall B. Bunker), American Accounting Association Southeast Region Meeting, Oxford, Mississippi (May 1, 2009).

### ***Other Presentations:***

-*Generally Accepted Accounting Principles in the United States*

-*Internal Control*

Presentations, with the aid of a translator, for Romanian business managers; Seminar organized by OK Service Corporation, Prahova, Romania; February 2004, Hotel Regina, Vienna, Austria.

**AWARDS AND HONORS:**

Doctoral Consortium Fellow, AAA/Deloitte/J. Michael Cook Doctoral Consortium, Tahoe City, California, June 2009.

Patterson School of Accountancy (University of Mississippi) Outstanding Doctoral Teacher Award, presented April 17, 2008.

Silas M. Simmons Bronze Medal Award for Outstanding Achievement on the 2006 CPA Examination (for the third highest score in the state of Mississippi), presented June 23, 2007.

**SERVICE AND COMMITTEES:**

MSCPA Awards, Education & Scholarships Committee, 2009 to 2011

**AFFILIATIONS:**

American Accounting Association (AAA)

American Institute of Certified Public Accountants (AICPA)

Mississippi Society of Certified Public Accountants (MSCPA)

Institute of Management Accountants (IMA)

Association of Certified Fraud Examiners (ACFE)