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Type of CPA Firm Association with Financial Statements and Commercial Lending Judgments*

Arnold Schneider
Georgia Institute of Technology, Atlanta, USA

This study examines whether the level of Certified Public Accounting (CPA) firm assurance associated with financial statements affects commercial lending decisions. A between-subjects behavioral experiment is used with three conditions involving different levels of CPA firm assurance—compilations, reviews, and audits. Findings indicate that neither the lenders' risk assessments of loan applicants nor their elicited probabilities of granting credit differed among the three levels of CPA firm assurance.

Keywords: commercial lending, compilations, reviews, audits

Introduction

Unlike public companies, whose financial statements must be accompanied by an independent audit report, privately held companies have no requirement for their financial statements to be audited (Lennox & Pittman, 2011). Often, non-public companies produce financial statements accompanied by services performed by Certified Public Accounting (CPA) firms that provide lower levels of assurance, namely, compilations and reviews. For a review, analytical procedures and management inquiries are conducted, but no other audit procedures are mandated. In a compilation engagement, the CPA firm prepares financial statements, but is not required to perform any verification procedures. Allee and Yohn (2009) extracted data from 790 non-public companies and found that 118 had their financial statements compiled by an accounting firm, 163 had reviews performed, 215 had audited financial statements, and the others produced financial statements without any association with a public accounting firm. The purpose of this study is to determine whether the type of CPA firm association with financial statements affects the decisions of commercial lenders who rely on these financial statements.

Audits require much more verification procedures than do reviews, and reviews entail more verification procedures than do compilations. As a result, audits should provide the most assurance to lenders, while compilations would provide the least assurance to lenders. An audit is considered to provide *reasonable* assurance about financial statement reliability, a review is considered to provide *limited* assurance, and a compilation is considered to provide *no* assurance. Therefore, lenders should benefit most by receiving audited financial statements, followed by ones reviewed, and then by compilations. At the same time, costs incurred by loan applicants would rise as the types of services move from compilations to reviews to audits. Loan applicants must consider whether the benefits of enhanced assurance are greater than the added costs. This

* **Acknowledgement:** The author gratefully acknowledges the research assistance provided by Jonathan Kugel.
Arnold Schneider, Ph.D., professor, Scheller College of Business, Georgia Institute of Technology, Atlanta, USA.

paper examines only the benefits of levels of assurance. In particular, are lending decisions affected by whether financial statements of loan applicants are compiled, reviewed, or audited? This question has implications for privately-held companies in that if lending decisions are not impacted by type of CPA firm assurance, then the loan applicants do not need incur higher costs for higher levels of assurance. On the other hand, if lending decisions are influenced by the type of CPA firm assurance, then the loan applicants may deem it worthwhile to incur added costs for services that provide greater assurance to lenders.

Prior Studies on Effects of Type of CPA Firm Association on Investing and Lending

A study by Foster, Garrett, and Shastri (2016) examined lending/investing judgments by using MBA students as surrogates for investors/lenders relating to a new business opportunity. The students assessed financial statement reliability as increasing from compiled statements, to reviewed statements, to audited statements. In addition, they showed a higher probability of investing/lending funds when the types of CPA firm association increased from compilations, to reviews, to audits. Since this study's research instrument did not indicate whether the funds were to be provided as loans or investments, it is unclear as to whether the students considered themselves as lenders or investors. So, the scenario in this study cannot necessarily be construed as one involving lending. In a context involving investing decisions, Schneider (2020) found that as the type of financial statement assurance increased from none to compilation to review to audit, investors perceived declining levels of risk associated with the investment. However, the level of assurance did not impact the dollar amounts that participants were willing to invest.

A number of studies have focused on the perceptions of compilations, reviews, and audits by commercial lenders. Kim and Elias (2007) demonstrated that bankers have different perceptions of financial statements prepared by loan applicants from those prepared by CPA firms. However, the perceptions did not differ among audits, reviews, or compilations. Other studies have compared the views of loan officers with those of accountants. Edmonds, Potter, and Weiss (1981) found that loan officers displayed a high degree of knowledge about the professional standards relating to audits, reviews, and compilations and their responses were similar to those of public accountants. Likewise, Nair and Rittenberg (1987) showed that the general understanding of CPA firm services by both commercial lenders and accountants is quite high and very similar. While Mayper, Welker, and Wiggins (1988) also found that both lenders and accountants have similar views about the relationships among audits, reviews, and compilations, some attributes are interpreted in different ways. Lenders seem to misperceive the CPA's role in review reports, whereas accountants believe that financial statement users tend to over rely on reviews and compilations. On the other hand, results from Bartlett (1991) indicate significant differences between perceptions of lending officers and accountants. In particular, lenders do not believe that audits provide as much assurance as do accountants. However, lenders attribute more assurance to reviews and compilations than do the accountants.

Several papers have focused on whether lending decisions are influenced by the type of CPA firm association with financial statements. Johnson, Pany, and White (1983) found that lenders perceive audits to be of higher quality than reviews, compilations, or statements with no CPA firm association, but these views did not lead to any significant differences in lending decisions. Wright and Davidson (2000) investigated how lending judgments are impacted by audits, reviews, and no CPA firm association with financial statements and showed that neither the existence nor the level of CPA firm association impacts loan officers' judgments about risk or decisions relating to approving loans. On the other hand, results from Baker and Cunningham (1993)

indicated that lenders require higher interest rates for loans accompanied by financial statements that are reviewed than for ones accompanied by financial statements that are audited. Similarly, Bandyopadhyay and Francis (1995) showed that loans have higher probabilities of approval and lower interest rates as the type of CPA firm association goes from compilations to reviews to audits. The mixed findings of these different lending studies are amplified by Miller and Smith (2002), whose results indicate that the type CPA firm association affects the amount of the loan, but not the decision to approve the loan or the interest rate assigned to the loan.

The current study differs in important ways from each of the above studies involving lending decisions. Johnson et al. (1983) elicited two dependent variables from the lenders—whether or not to grant the loan and an interest rate premium to charge if the loan were to be granted. The current study elicits two different dependent variables—the risk associated with granting the loan and the probability of granting the loan. The size of the loan applicant and the loan amount are also quite different. The company in the scenario of Johnson et al. (1983) has sales of $8 million and the loan amount is $660,000, while the current study portrays a much larger company having sales of around $49 million and a loan request of $1 million. In addition, whereas Johnson et al. (1983) had fixed assets as collateral, the current study uses accounts receivable as collateral. "Lenders will scrutinize accounts receivable closely because they are a principal form of collateral" (Rosen 2020, p. 24). Finally, the current study identifies the CPA firm as a large regional one, but Johnson et al. (1983) make no mention about the size and type of CPA firm.

The main difference between the current study and the ones by Baker and Cunningham (1993) and Wright and Davidson (2000) involves the independent variables. While the current study examines the effects of audits, reviews, and compilations, the other two studies do not include compilations. As for the dependent variables, both of the other two studies elicit a yes or no decision on loan approval, while the current study obtains a probability of loan approval. In addition, while the current study specifies the CPA firm as a large regional one, neither of these other two studies mentions the size or type of CPA firm. Also, the current study's setting includes accounts receivable as collateral, but Baker and Cunningham (1993) indicated there is no collateral and Wright and Davidson (2000) made no mention of collateral. Furthermore, the loan sizes in these two studies—$100,000 and $500,000—are much smaller than the $1 million loan size in the current study. Another important distinction from Wright and Davidson (2000) is that they use Canadian bankers as opposed to the U.S. bankers used in the current study.

The most significant difference between the current study and the one by Bandyopadhyay and Francis (1995) relates to the experimental design. Instead of using a between-subjects design, as is used in the current study (and all other ones involving type of CPA firm association and lending), Bandyopadhyay and Francis (1995) used a within-subjects design, which is widely viewed as disadvantageous in these types of settings because of the potential to produce demand effects. Other differences between that study and the current one is that the former has a yes or no loan approval dependent variable as opposed to eliciting a probability of loan approval, a small local CPA firm rather than a large regional one, inventories a collateral versus accounts receivable, and smaller loan sizes—$265,000 and $535,000, as opposed to $1 million.

There are also several differences between the current study and the one by Miller and Smith (2002). Most notably, the dependent variables differ. Whereas the current study elicits the risk associated with granting the loan and the probability of granting the loan, Miller and Smith (2002) obtained maximum loan amounts and interest rate premiums. Miller and Smith (2002) also portrayed a much smaller loan applicant—less than

$900,000 in assets versus around $62 million for the current study. The size and type of CPA firm also differs—Miller and Smith (2002) used both a large international firm and a small local firm, whereas the current study identifies the firm as a large regional one. Finally, Miller and Smith (2002) obtained lenders only from banks having assets of more than $50 million, but the current study has no such restriction.

Perhaps the biggest difference between the current study and all of the prior research dealing with CPA firm association and lending relates to the time period of study. The prior research studies were conducted two to four decades ago. Current banking practices and lending protocols may be quite different from those earlier times. In particular, the financial crisis that occurred over a decade ago could have impacted the way lending decisions are now made.

Hypotheses

Reviews necessitate only the performance of analytical procedures and inquiries, so lenders are apt to have more confidence in financial statements that are accompanied by audits than by reviews. Furthermore, since compilations do not require any verification procedures, lenders likely have less confidence in financial statements accompanied by compilations than by reviews. These arguments about lender confidence imply that as the type of service increases from compilations to audits, perceived risks of lending to the company would decrease, and in turn, lenders would likely assign a higher probability of granting credit.

This research uses an experimental methodology to investigate lenders' judgments when compilations, reviews, and audits are conducted for financial statements of loan applicants. Based on the discussions presented above, the following hypotheses are presented:

H1: As the type of CPA firm association with financial statements increases, the assessment of risk associated with granting the credit will decrease.

H2: As the type of CPA firm association with financial statements increases, the probability of granting the credit will increase.

Research Participants

Loan officers were obtained by contacting commercial banks located in four states of the southeastern portion of the United States. If lenders indicated they were willing to participate in the study, questionnaires were emailed, mailed, or faxed to them.[1] A total of 318 questionnaires were sent to 132 different banks and completed questionnaires were later returned by 63 lenders from 46 different banks.

The lenders average 25 years serving as loan officers and 23 years as commercial lenders. The average age is 54 years, 32 percent have a master's degree or higher, and 95 percent are male. Thirty-five percent of the participants are affiliated with banks having more than one billion dollars in assets, 37 percent normally evaluate loan requests above $1 million, and 62 percent have sole authority in making lending decisions (up to a certain dollar limit).

Methodology[2]

Loan officers were given a case scenario involving a lending decision pertaining to a hypothetical company. The case contained background information about the company and its financial statements for recent years.

[1] In many cases, the lenders mentioned that completion of the questionnaires would be subject to approval by their superiors.
[2] The methodology of this study was approved by the Institute Review Board of the author's university.

Lenders first evaluated the level of risk associated with approving a $1 million line of credit. This was elicited using a 10-point scale ranging from very low risk to very high risk. Next, they were asked to assess the probability that they would grant the $1 million dollar line of credit to the company at a reasonable rate of interest as determined by their financial institution. Afterwards, the lenders were instructed to rate the importance of various factors in making their lending decisions. Finally, they were presented with a manipulation check and demographic questions.

Three different versions of a questionnaire were developed by varying the information pertaining to the level of CPA firm association with the financial statements. One version (COMP) described financial statements that were compiled by a public accounting firm. A second version (REV) indicated that a review of the financial statements was performed by a public accounting firm. A third version (AUDIT) portrayed financial statements that were audited by a public accounting firm. The questionnaires were pre-tested with seven commercial lenders who did not participate in this study and some slight revisions were made based on their suggestions. Each lender was given only one of the three questionnaire versions. The number of participants in each of the three groups is shown in Table 1.

Table 1

Descriptive Statistics for Response Variables

Groups	Sample sizes	Risk assessment means (Medians) [Standard deviations]	Probability of lending means (Medians) [Standard deviations]
AUDIT	25	5.56 (6.00) [2.08]	0.64 (0.70) [0.25]
REV	18	5.56 (4.50) [2.18]	0.65 (0.80) [0.28]
COMP	20	5.23 (5.00) [2.06]	0.59 (0.60) [0.28]

Note. For risk assessment, the rating scale ranged from 1 = “Very low risk” to 10 = “Very high risk”.

Findings

At the end of the questionnaire, the lenders rated the level of assurance associated with compilations, reviews, and audits as a manipulation check. Using a 10-point scale with 1 = “No assurance” and 10 = “High level of assurance”, the average ratings of compilations, reviews, and audits were 4.57, 7.03, and 9.45, respectively. Differences for each of the three pairwise comparison tests are significant (p = 0.000). Therefore, the manipulation of the independent variable, i.e., type of CPA firm association, would seem to have been strong.

Near the end of the questionnaire, the lenders were also asked to recall the information in the case scenario about the level of CPA firm association. Four of the 63 respondents did not recall the information accurately. When these respondents are deleted from the data analyses, the results remain virtually unchanged from the results using the complete set of data. Consequently, the data analyses that follow will pertain to the complete set of data.

Table 1 reports the mean responses to the two dependent variables for each of the three treatment groups. The average risk assessment (1 = "Not risky at all"; 10 = "Very risky") for all three groups overall is 5.45, with a range of 5.23 for the COMP group to 5.56 for each of the other two groups. The overall average probability of granting credit is 0.62, with a range of 0.59 for the COMP group to 0.65 for the REV group. A MANOVA reveals that the differences across the three groups are not significant (Wilks' Lambda = 0.927; $p = 0.342$).

H1 predicts that risk assessments would decrease as the level of CPA firm association increases from COMP, REV, to AUDIT. For the risk assessment variable, an ANOVA produced no significant differences across these three groups ($p = 0.843$). Additionally, an ANCOVA was conducted for this risk assessment variable with lenders' age, years of lending experience, years as a commercial lender, educational degree, and gender as covariates. Results again yield no significance differences across these three groups ($p = 0.790$) and so H1 is not supported.

H2 predicts that the probability of granting credit would increase as the level of CPA firm association increases from COMP, REV, to AUDIT. An ANOVA was performed for testing the probability of granting credit across the three groups and the result was not statistically significant ($p = 0.770$). Furthermore, an ANCOVA was conducted for the mean probability of granting credit variable with lenders' age, years of lending experience, years as a commercial lender, educational degree, and gender as covariates. Once again, no significance resulted for the probability of granting credit variable ($p = 0.541$). H2, therefore, is not supported.

Table 2

Factor Means

Factor	Mean rating
Income statement	9.43
Balance sheet	9.41
Statement of cash flows	8.85
Securing loan with receivables	8.48
CPA firm association with financial statements	7.95
Company growth	7.68
Company description	7.57

Note. Rating scale: 1 = "No importance"; 10 = "Very important".

Once the lenders provided responses to the dependent variables, they then rated the importance of seven factors in making their lending judgments (1 = "No importance"; 10 = "Very important"), as reported in Table 2. The most important factors are the income statement and balance sheet with ratings of 9.43 and 9.41, respectively. The least important factors are "company growth" and "company description" with ratings of 7.68 and 7.57, respectively. "CPA firm association with financial statements" has a rating of 7.95, which is ranked fifth in importance out of the seven factors. This rating is higher than the midpoint of 5.5, so lenders do impart some importance to the level of CPA firm association with financial statements. However, other factors—especially the three types of financial statements—appear to dominate in making lending judgments. This may explain this study's lack of significant lending judgment results for level of CPA firm association with financial statements.

Conclusions

This paper investigates whether the type of CPA firm association with financial statements impacts commercial lending judgments. Findings reveal that neither the lenders' risk assessments nor their elicited probabilities of granting credit differed among the three levels of CPA firm assurance.

This study's findings seem to suggest that loan applicants need not consider incurring higher costs to obtain higher levels of CPA firm assurance. Likewise, CPA firms desiring to earn more fees by providing services with greater levels of assurance should be cognizant that it may not be appropriate to state to clients that higher levels of CPA firm assurance would result in a greater likelihood that commercial lenders would approve loans. When deliberating on the regulation of CPA firm assurance services, standard setters should be aware about the lack of impact of different levels of assurance on commercial lending decisions.

The results of this study are consistent with those found in earlier studies by Johnson et al. (1983), Wright and Davidson (2000), and Miller and Smith (2002). On the other hand, findings in Baker and Cunningham (1993) and Bandyopadhyay and Francis (1995) indicated that level of CPA firm association did impact lending decisions. There does not appear to be an explanation that reconciles the conflicting findings of these two sets of studies.

Several limitations of this study should be noted. First, the findings pertain to a specific lending scenario and cannot necessarily be generalized to other settings. Future research should examine the impact of CPA firm association with lending scenarios having different characteristics regarding the type of borrower, collateral, credit line amount, and financial condition of the borrower. A second limitation is that loan officers would have access to more information about a loan applicant than was included in the questionnaire provided to this study's participants. Third, the group sample sizes were relatively small, ranging from 18 to 25 loan officers. Larger sample sizes would have enhanced the statistical power in this study.

This research study examined only the benefits to lenders from receiving loan applicants' financial statements having increasing levels of CPA firm association. Future research should examine both the benefits and the added costs of having increasing levels of CPA firm association to determine whether, and under what types of scenarios, the benefits would exceed the costs. This study did not examine the effects of a condition under which there was no CPA firm association with financial statements. Future research can address the question of whether some form of CPA firm association with borrowers' financial statements would produce lending judgments that differ from instances where there is no CPA firm association with borrowers' financial statements.

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