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AN EMPIRICAL ANALYSIS OF LENDING DECISIONS AND REPORT PURCHASES OF PRIVATELY HELD MIDDLE MARKET COMPANIES

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ABSTRACT

Several experimental studies have found that the auditor's report did not significantly influence bank lending decisions. This study employs actual loan data to test whether the level of reporting service influences lending decisions of Privately Held Middle Market (PHMM) companies. The results indicate that the report type significantly influences at least one critical aspect of the lending decision-- the amount lent. Further, the report type was found to be strongly related to the amount of collateral and the size of the company. In addition, descriptive evidence is provided on what type of reporting services are purchased by PHMM companies and what type of accounting firms are providing those services.

Competition among CPA firms for clients in the privately held middle market (PHMM) has increased sharply in recent years. Historically, large public accounting firms concentrated on audits of large companies, ignoring the middle market. However, as market saturation occurred, large accounting firms began to target PHMM companies for new client development. Arnold et al. (1984, p. 74) state that "virtually every accounting firm has selected the expansion and improvement of services to these companies as a major goal." This new focus on PHMM companies is evidenced further by the increasing prominence of divisions devoted exclusively to this clientele, e.g. Emerging Business Sections, or Entrepreneurial Services Divisions. In addition, the large accounting firms are expending substantial resources funding research projects regarding PHMM companies.

Public accounting firms have not been alone in their increasing awareness of privately held companies. The American Institute of Certified Public Accountants (AICPA) has also given special consideration to these companies. In an effort to be responsive to these companies, the AICPA has established two new levels of reporting services for nonpublic entities: reviews and compilations, both of which were offered as alternatives to the traditional audit. Each level of reporting involved a different degree of assurance: an audit involves positive assurance, a review negative assurance, and a2 compilation provides no assurance at all.

The purpose of this paper is to analyze whether lending decisions are significantly influenced by the level of reporting services a PHMM Co.receives. Empirical evidence is provided regarding the relationship between the type of reporting services received and the 1 size of the loan, 2 size of the collateral, 3 capital structure of the company, and 4 size of the company. Also, the paper provides additional descriptive evidence with respect to 1 the type of reporting services-audit, review, or compilationthat PHMM companies are electing to purchase; and 2 the type of accounting firm-Big Eight, National or Local-providing these services.

In the next section, the limited

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research related to PHMM companies is reviewed. Then the pertinent research regarding the effect of the auditor's report on the loan decision is reviewed. The method, results and discussion follow. The paper ends with implications of the findings for CPA firms.

RELATED RESEARCH

PHMM companies are not required to disclose financial information publicly, and their marked propensity for privacy is well known. Accordingly, research on PHMM companies has been limited because of the scarcity of available data. However, several recent research studies have been performed which address the issue of reporting services purchased by PHMM companies.

Type of Reporting Services Provided to Private Companies

In a recent study, Diamond, Arnold and Cherry (1985) attempted to analyze the nature of services provided by CPAs to middle market clients. A sample of middle market executives responded to a mailed questionnaire asking them to check the level of reporting service purchased on both an interim and annual basis. The choices were "audit," "review," "compilation" and "none." A large percentage of the respondents checked multiple responses for both the annual and interim categories. This indicates apparent confusion among middle market executives regarding the level of reporting services they are receiving. Consequently, the researchers were unable to answer the original research question regarding the nature of reporting services. However, they did identify an important issue regarding whether middle market executives understand the very real differences in the nature and implications of these services. In a similar study, O'Keefe and Barefield (1985) surveyed executives of very small private companies (ave. assets = $915,801) regarding the type of reporting services purchased. They reported 15% of the firms 'bought' an audit, 18% a review, 51% a compilation and 16% bought no report. The researchers analyzed the report type question and, unlike the Arnold study, found respondents were not confused about the type of report they had purchased. The difference in these two results may be because the O'Keefe and Barefield study defined each report type on the first page of the questionnaire.

Type of Accounting Firms Servicing Private Companies

O'Keefe and Barefield (1985) were also interested in the type of accounting firms which performed the reporting service. They reported 80% of the companies selected a local accounting firm, 7% a regional firm and 13% a national firm. The large accounting firms were found to produce proportionately more of the audits and reviews and disproportionately fewer of the compilations.

Report Type and Lending Decisions

Arnold and Diamond (1981) surveyed bankers regarding their attitudes toward audits, reviews, and compilations. They found that bankers require a given level of service based on traditional lending factors such as loan size and the customer's capital structure. That bankers would require a given level of reporting service implies the lending decision is impacted by the level of reporting service a company received. Johnson, et. al. (1983) conducted an experiment to determine if the level of auditor association did, in fact, significantly influence the loan decision. The level of auditor association (audit, review, compilation, no association) was manipulated and bankers were asked to 1) accept or reject the loan of a closely held company, and 2) determine the interest rate premium to be charged. They found that neither the decision to grant the loan nor the decision on the interest rate premium was significantly affected by the level of auditor association. The Johnson et. al. study confirms results found in similar studies prior to the advent of reviews and compilations. Libby (1979) and Estes and Reimer (1977) also found no significant differences in loan decisions when they tested variations of the standard audit report.

In contrast to the previous experimental studies, this study uses actual loan data to test the issue of whether the level of report service impacts the lending decisions.

METHOD

Research Questions

The main research question addressed in this study is: Does the level of reporting service that a privately held middle market company receives significantly influence the lending decisions?

Specifically considered is the relationship between the level of reporting service and certain lending factors:

1. loan amount--as measured by the average outstanding balance,
2. loan collateral--as measured by total assets,
3. capital structure of the company--as measured by the ratio debt/equity, and
4. size of the company--as measured by total sales.

I hypothesize that more assurance (i.e. an audit or review) will be required as the company or loan becomes larger. I also hypothesize that more assurance will be required as the collateral increases since the collateral represents the bankers protection in case of loan default. Since there is a higher risk associated with undercapitalized companies, I also expect more assurance to be required with higher debt/equity ratios.

Two additional research questions are considered in this study: What type of reporting services are provided by CPAs to privately held middle market clients? What type of accounting firms provide services to privately held middle market clients?

Description of the Sample

Financial statements date for 51 PHMM companies was provided through the cooperation of six large commercial national banks. Sales for the companies in the sample ranged from \$5.1 to \$55 million with an average of \$19 million. Total asset size ranged from \$1.6 to \$31 million dollars with an average of \$10 million. All data was provided on an anonymous basis to protect its confidentiality.

RESULTS AND DISCUSSION

The results of the study are organized in the order the research questions were presented above.

Effect of Report Type on the Lending Decision

In order to test the hypothesis that type of reporting service influences the lending decision, a multivariate analysis of variance (MANOVA) was performed. MANOVA extends the more familiar univariate analysis of variance (ANOVA) to the case of multiple dependent variables and tests for differences among group means for all dependent variables simultaneously. In this analysis sales, loan amount, and the debt/equity ratio were used as dependent measures and the three levels of reporting service (audit, review, or compilation) served as the independent variable. The results of the MANOVA and a summary table of the means of the dependent variables are presented in Tables 1 and 2.

The overall MANOVA is significant at the .035 level (p .035) indicating that when all of the dependent variables are considered simultaneously

TABLE 1

Manova and Anova Results

Variable	SS	MS	MS(Error)	F(2,46)	P
Loan Amount	98.90	49.45	9.36	5.28	.009
Total Assets	569.04	284.52	45.20	6.30	.004
Debt/Equity	9.46	4.73	4.52	1.05	.359
Sales	1483.93	741.97	157.93	4.70	.014
Multivariate				2.2	.035

TABLE 2

Means of the Dependent Variable

	Loan Amount	Total Assets	Debt/ Equity	Sales
Audit	4.30	12.54	2.97	22.9
Review	2.27	8.90	2.76	20.69
Compilation	.96	4.30	1.92	9.80

Bracketed means do not differ significantly.

there are differences which depend on the level of reporting service received. A separate univariate ANOVA was performed on each of the dependent variables to further isolate the reasons for significant differences between the report services. The ANOVA results (see Table 1) indicate that all dependent variables, except the debt/equity ratio, were significantly affected by the type of reporting service. That is, only the means of the debt/equity ratio did not differ significantly among the report types.

To further identify which differences in the means are significant, the sales and loan amount were tested using the Student-Newman-Keuls (SNK) test (alpha = .05). The SNK test groups together means which do not differ significantly from each other. Table 2 shows means which do not differ statistically enclosed by a common bracket.

I hypothesized that more assurance (i.e. an audit or a review) would be required as the size of the loan becomes larger. As expected, the mean loan amount of the audited companies was found to be significantly higher than the mean loan amount of companies whose financial statements were reviewed or compiled. Large loans in PHMM companies are often collateralized by a company's accounts receivables and inventory. Of the three reporting services, only an audit requires confirmation of accounts receivable and observation of inventory. Hence, it is not too surprising that most PHMM companies with large loans were audited. It should be noted that the difference between the means of reviewed and compiled companies, while not statistically significant, was fairly large. The mean loan amount for the companies with compiled statements was only .96 ($960,000). This result reflected the sentiment often expressed by bankers that compilations should not be relied on in the making a lending decision.

This result, pertaining to the relationship between the level of reporting service and size of the loan, is particularly important. Previous experimental studies found that the lending decision (in terms of accept/reject or the interest rate charged) was not affected by the auditor's report. In contrast, this study indicates that the report type definitely impacts at least one critical aspect of the lending decision--the amount lent. It was also hypothesized that the assurance required would increase as collateral increases. Since collateral represents the lender's last recourse, one would expect lenders to be particularly concerned with the underlying value of the company's assets. Only an audit involves other verification of the existence, ownership and valuation of assets. As expected, the mean total assets of the audited companies was found to be significantly higher than the mean total assets of companies whose financial statements were reviewed or compiled.

It was also hypothesized that more assurance would be required as the company size becomes larger. We found that the mean sales for audited and reviewed companies were significantly higher than the mean sales of companies whose financial statements were compiled. Thus, larger companies are much more likely to be audited or reviewed than compiled. This confirms our a priori expectation. The relationship between size and type of reporting service is discussed in more detail later in the paper.

An unexpected result of the study pertains to the debt/equity ratio finding. It was hypothesized that companies which were more highly leveraged would be audited because of the higher risk associated with under capitalized companies. This hypothesis was not confirmed. The ANOVA indicated that the debt/equity ratio did not differ significantly among PHMM companies whose financial statements were audited, reviewed or compiled. This result might have occurred for one of the following reasons. First, it is possible that the debt could be composed of significant "trade" debt. Unlike bankers, trade creditors would not be in position to "push" for an audit. Second, and more likely, the result could be due to the nature of the sample.

Since the data was collected from loan files of banks, it included only "successful loan applicants." Most companies with debt/equity ratios outside a limited range would not be included in the sample. Thus it is possible that the result occurred because the size of the sample was insufficient to detect such small differences.

Type of Reporting Services Provided To Private Companies

Table 3 presents a breakdown of the type of reporting services provided by accountants to PHMM companies.

TABLE 3
Type of Reporting Services

	Number	Percent
Audit	24	47%
Review	14	28%
Compilation	13	25%
	51	100%

Approximately one-half of the companies received an audit, one-fourth a review and one-fourth received a compilation. Although many PHMM companies are taking advantage of lower-priced reviews and compilations, a significant number of companies still elect to received an audit. To analyze if the size of the company might be driving this result, the sample was divided into companies over $15 million in sales (26 companies) and companies under $15 million in sales (25 companies). Table 4 presents the relationship between type of reporting service and size of the company. A test of no association between size of company and type of reporting service indicated a significant relationship ((2)=9.17,P=.010).

Two results are apparent regarding the interaction between the type of report and the size of the firm. Not surprisingly, only 8% of the larger companies received compilations while nearly half (44%) of the smaller companies did. Size is clearly an important variable in deciding whether to receive a compilation. However, size does not appear to be as influential in deciding whether to 'buy' an audit.

Even though significantly more expensive than a review or a compilation, 32% of the smaller companies still elected to receive an audit. Interviews with commercial lenders suggested one possible cause for this. Entrepreneurs, by definition, are those who start and conduct a business, usually assuming full control and risk. The lenders indicated that the owners of PHMM companies are, almost exclusively, sales driven. Although the entrepreneurs are very confident of their abilities relating to sales, they are less sure of the financial and internal control aspect of their businesses. Consequently, many entrepreneurs are willing (or sometimes required by lenders!) to pay the higher price of an audit in exchange for the higher degree of assurance.

Type of Accounting Firm and Nature of its Services Provided to Private Companies

Table 5 presents the type of accounting firm and the nature of the serviced provided to PHMM companies.

One interesting finding is that 56% (29 of 51) of the PHMM companies are serviced by local accounting firms, 27% by national firms, but only 16% by Big Eight accounting firms. Unfortunately, data regarding market shares in previous years are not available. However, the result does seem to suggest that Big Eight firms may not be making the desired inroads into the middle market. Consideration of the breakdown of type of services provided by each type of accounting firm may help explain this.

The local accounting firms provide a well-balanced mix of reporting services. In contrast, the Big Eight firms tend to provide audits almost exclusively. It may be that the Big Eight firms have failed to communicate adequately

TABLE 4

Type of Report By Size of Firm

	Companies over $15		Companies under $15	
	Number	Percent	Number	Percent
Audit	16	62%	8	32%
Review	8	30%	6	24%
Compilation	2	8%	11	44%
	26	100%	25	100%

TABLE 5

Breakdown of Services Provided By Firms

	Big 8	National	Local
Audits	7	8	9
Reviews	-	4	10
Compilations	1	2	10
	8	14	29

to the middle market that they can provide reviews and compilations on a competitive basis. Further research on PHMM companies executives' perceptions of Big Eight accounting firms would help CPA firms in formulating future marketing strategies.

IMPLICATIONS OF THE FINDINGS OF CPA FIRMS

The usual caveats about generalization of the results apply to this study. Specifically, the PHMM companies included in the sample included only successful loan applicants. Hence, these companies may display characteristics which are not applicable to the population of PHMM companies taken as a whole.

This study found that loan decisions are significantly impacted by the type of reporting service selected by PHMM companies. This result calls for closer cooperation with bankers when accounting firms are guiding clients in the selection of the appropriate level of service. This will also benefit the accounting firms, since developing closer relations with bankers may provide new sources for referrals.

The study also indicated that a significant shift away from audits has occurred with PHMM companies. Approximately one-half of these companies receive audits, one-fourth reviews and one-fourth compilations. However, as previous research has indicated, there may be significant confusion among executives of PHMM companies about the differences between audits, reviews, and compilations. It may be that many PHMM companies have not changed reporting services because of an information gap about the different levels of reporting service. This presents the opportunity for accounting firms to either improve present client relations or develop new client relations by conducting seminars explaining the difference between the services. Even if a reduced level of service is not appropriate for a particular company at that time, goodwill will be generated. This may be a particularly appropriate strategy for the Big Eight accounting firms, since the study suggests that PHMM executives may not realize Big Eight firms can provide reviews and compilations on a cost competitive basis. Privately held middle market companies represent a major source of revenue and new business development to public accounting firms. In order to serve PHMM companies, accounting firms must understand the market and the needs of these companies. Further research in these areas is needed.

ENDNOTES

1

For example, Touche Ross & Co. recently sponsored the research project "What Services Does the Middle Market Want? An In-depth Analysis" by Siegel, Shannon, Melchert and Stahl (1986). Also, the Private Business Advisory Services Division of Peat, Marwick, Mitchell & Co. funded "An Analysis of the Nature and Quality of Services Provided by CPAs to Middle Market Clients" by Diamond, Arnold and Cherry (1986).

2

See Johnson, Pany and White (1983) for further discussion of the nature of reviews and compilations.

3

Previous research by this author found similar confusion regarding limited assurance engagements on the part of bankers. See Pillsbury (1985).

4

Middle market companies are generally categorized as those companies with sales between $5 and $100 million dollars. O'Keefe and Barefield considered small companies in their study. They did not present sales information but did present average asset data ($915,801). The average asset size of companies in the present study was $9.8 million. Because of the significant differences in size of the companies considered, comparing the results of the two students would be inappropriate.

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