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Studies on the Impact of Accounting Information and Assurance on Commercial Lending Judgments

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Abstract

This paper reviews studies that have examined how accounting information impacts commercial lending judgments. Issues discussed involve the usefulness of accounting data in lending decisions, effects of different accounting methods on lenders' judgments, bankruptcy and default judgments, and decision processes pertaining to the use of accounting information in lending decisions. Additionally, the paper reviews the research on how audits and other forms of assurance influence commercial loan officers' judgments. Topics include the way perceived auditor independence influences loan officers' judgments, the impact of financial statement audits and audit opinions on lending decisions, how internal control reports and other CPA firm reports influence loan decisions, ways in which audit report disclosures and wording impact lending decisions, how perceived auditor quality affects lending decisions, and the effects of limited assurance engagements on loan officers' judgments.

Commercial lenders use accounting information to assess the financial health of loan applicants as part of their loan evaluation process. The accounting information is often accompanied by audits or other forms of assurance provided to lenders. This paper reviews studies that have examined how accounting information and various forms of assurance impact commercial lending judgments.

This paper focuses on commercial lending by financial institutions and therefore does not include studies involving personal lending or issuance of public debt (bonds). Furthermore, the studies reviewed pertain to judgments about creditworthiness and not about monitoring of lending agreements (e.g., debt covenants). The studies reviewed deal with judgments relating to evaluating companies as borrowing prospects – e.g., risk assessments, default likelihood judgments, credit granting decisions, interest rate decisions, likelihood of bankruptcy.

This paper first addresses the impact of accounting information on commercial lending decisions. Issues involving the usefulness of accounting data in lending decsions are examined, then the paper turns to the effects of different accounting methods on lenders' judgments, followed by a review of literature on bankruptcy/default judgments, and then there is a discussion of bankers' decision processes pertaining to the use of accounting information in their lending decisions.

The second portion of this paper focuses on how aspects of assurance services affect lending decisions, beginning with the way perceived auditor independence influences loan officers' judgments. Then, the impact of financial statement audits and audit opinions are examined, followed by the impact of internal control reports and other reports. Next, the paper reviews studies related to how audit report disclosures and wording influence lending decisions. Afterwards, studies dealing with how perceived auditor quality impacts loan decisions are discussed, followed by a review of studies involving other audit-related issues. Finally, the paper examines studies involving the effects of limited assurance engagements on loan officers' judgments.

IMPACT OF ACCOUNTING INFORMATION ON LENDING

Usefulness of Accounting Data

General Issues

Some studies have addressed very general issues involving the usefulness of accounting data in lending decisions. These issues include reliability of accounting data, the use of generally accepted accounting principles (GAAP), aggregation of accounting data, and interactions of accounting data valence with borrowers' character traits.

Holder-Webb and Sharma (2010) show that lenders' perceived reliability of financial reports is a factor in their lending decisions. As well, DeZoort, Holt, and Taylor (2012) demonstrate the financial reporting reliability is negatively related to lenders' assessments of loan default risk. These results are hardly surprising. Interestingly, however, Holder-Webb and Sharma (2010) find that the perceived reliability of financial reports is not affected by the applicant's corporate board strength or by its financial condition.

Financial reporting reliability is generally viewed as being enhanced when financial reports adhere to established standards. Gopalakrishnan, and Parkash (1995) find that 90 percent of the lenders they surveyed indicated that lending agreements consistently refer to GAAP. Williams, Chen, and Tearney (1991) found that three of four GAAP accounting standards examined (accounting for leases, deferred taxes, and compensated absences) were significantly more relevant to bankers than their respective non-GAAP alternatives. In contrast, the accounting for interest on construction loans did not matter as to whether GAAP was followed. No studies have examined issues unique to International Financial Reporting Standards.

Some studies have examined various characteristics of accounting information. Abdel-Khalik (1973) examined the effects of aggregated versus disaggregated accounting information on lending decisions. Results showed that when the financial situation of the borrower is marginal, the disaggregation of its financial information provides lenders with better risk indicators, so more detailed financial reports are preferred. Addressing the valence of accounting information, Beaulieu (1994) found that when accounting facts are positive (i.e., supporting loan approval), the rate of loan approvals is affected by borrowers' character traits, but when accounting facts are negative, loan approval rates are unaffected by character traits.

However, in contrast to experienced lenders, inexperienced lenders sometimes approved loans when accounting facts are negative. Beaulieu and Rosman (2003) examined lenders' perceptions of the credibility of accounting information and found that lenders tend to deny loans to less credible clients rather than restructure the conditions of the loan. Other characteristics of accounting information that may impact lending would be interesting to examine, such as the information wording or presentation format.

Financial Statements

Several studies have examined the importance of financial statements and restatements in making lending decisions. Berry and Robertson (2006) surveyed bankers and find that audited financial statements are the most important single source of information for lending decisions. Graham, Li, and Qiu (2008) demonstrate that bank loans initiated after financial statement restatements have higher loan spreads than those initiated before restatements. Furthermore, the increase in loan spread is larger for fraudulent restating companies than for other companies.

Other studies have examined the importance of specific financial statements. Berry et al. (1984) find that bankers highly value the profit and loss statement, the balance sheet, and the notes to the financial statements, but there was a lack of acceptance regarding the source and application of funds statement. Whereas Berry et al. (1984) indicate that the source and application of funds statement is of questionable usefulness, Berry and Robertson (2006) show that its successor, the cash flow statement, is quite important to lenders, and in fact, more prominent than the balance sheet or income statement. Schneider (2013) finds that commercial lenders rate the balance sheet, income statement, and statement of cash flows roughly equal in importance for lending decisions.

Findings in Street and Stanga (1989) reveal that segment cash flow statements are relevant in lending decisions under certain circumstances. Kwok (2002) performed a verbal protocol analysis of commercial lending decisions and finds that the majority of lenders obtained cash flow information from financial statements other than the statement of cash flows. Lenders ignored the information contained in the statement of cash flows that is incremental to that in the funds flow statement.

These studies on the importance of financial statements in lending decisions have focused on loan applicants' financial statements for prior years. It would be interesting to examine the impact of forecasted financial statements on lending decisions.

Financial Statement Items

Various studies have focused on the effects of specific financial statement items as they relate to lending decisions. These include ratios, inflation-adjusted data, core vs. non-core activities, and financial statement item needs for different sized applicants.

Dietrich and Kaplan (1982) used a large commercial bank's risk classifications of loans evaluated for a two-year period to develop a regression model which explains the lending officers' classification decisions. Most of the explanatory power was provided by two variables – a debt-to-total-assets ratio and a funds-flow-to-fixed-commitments ratio.

Campbell (1984) finds little or no evidence that information about earnings per share, deferred income taxes, or inflation adjusted data were useful to bankers in credit granting decisions. However, capital lease information appeared to be useful.

Maksy (1984a) and Maksy (1984b) report on the same study that examined the effects of disclosing inflation-adjusted accounting data on lending decisions. Maksy (1984b) indicates that decisions made by lenders receiving inflation-adjusted accounting data and a control group which did not receive inflation-adjusted accounting data were not significantly different. Maksy (1984a) demonstrates that although most of the lenders did not appear to use the inflation-adjusted accounting data provided, those who did, evaluated a loan applicant twice as risky and recommended lower loans than the control group.

Nichols (1997) finds that the separation of financial statement data into core and non-core activities is useful in lending decisions. Furthermore, combining this separation with expanded segment information in financial statements increases the decision usefulness for lenders. However, the inclusion of forward-looking information did not impact lending decisions. Sands and Auyeung (2001) show that lenders' decisions are unaffected by where various items are placed on an income statement.

Stanga and Tiller (1983) had bankers rate the importance of various financial statement items such as cost of goods sold, depreciation expense, deferred income taxes, and cash provided by operations. They demonstrate that the accounting information needs of bankers who make lending decisions involving large public companies are similar to the needs of bankers who make lending decisions involving small private companies.

Notably absent from these studies on financial statement items is an analysis of whether preliminary profit figures on the income statement, such as gross profit or operating income, are important to commercial lenders. Also, what is the relative importance of current assets to noncurrent assets or current liabilities to noncurrent liabilities? How important would lenders consider each of the three sections of the statement of cash flows?

Influence of Accounting Methods

Many studies have investigated the effects of different accounting methods on lending decisions. These methods encompass accounting topics such as lease accounting, revenue recognition, cash flow statement presentation, and liability disclosure.

Wilkins and Zimmer (1983) indicate that lenders' credit evaluations and decisions were not affected by applicants' methods of accounting for financial leases (capitalization versus footnote disclosure only). Hartman and Sami (1989) also examined the accounting treatment of lease contracts. Results reveal that interest rates charged on loans were higher and credit ratings were lower with the capital lease method than with the operating lease method or for a control group with no leases. Durocher and Fortin (2009) find that bankers consider both capital and operating lease information in credit granting decisions, but capital lease information that is recognized on balance sheet is given more consideration than operating lease information that is disclosed in the footnotes. Therefore, operating lease information receives less attention than capital lease information in bankers' lending decisions.

Some researchers have examined the effects of alternative liability disclosures. Reeve (1982) tested whether bankers would use project financing arrangement information differently if disclosed as a liability on the balance sheet versus footnote disclosure. Results reveal differences and that the lenders did not correctly assimilate the footnote information. Harper, Mister, and Strawser (1987) find that lenders do not treat pension information reported in a footnote as they would a balance sheet liability. When an unfunded accumulated pension benefit was shown as a liability on the balance sheet, it was perceived as a form of debt by more lenders than when the same information was reported in a footnote. Sami and Schwartz

(1992) extend the Harper, Mister, and Strawser (1987) study on pension reporting to examine the effect on lending decisions and show that the pension liability reported on the balance sheet results in higher interest rates, lower assessed probabilities of repayment, and lower maximum loan amounts granted than when the pension liability is merely disclosed in a footnote. Harper, Mister, and Strawser (1991) surveyed commercial lenders and find that they are more likely to perceive an obligation for unfunded postretirement benefits as a form of debt when recognized as a balance sheet liability than when disclosed in the financial statement footnotes. All of these studies suggest that reporting liabilities on the balance sheet has a greater influence on lending decisions than when they are merely disclosed in footnotes.

Brooks, Jerris, and Pearson (1996) examined whether commercial lenders would use historical cost or fair value data to calculate debt-to-equity ratios in assessing the liquidity and solvency of a potential loan client. Findings indicate that most used fair values, but only when formally recognized in the body of the balance sheet. Lenders appeared to disregard valuation information contained in financial statement footnotes, consistent with Reeve (1982), Harper, Mister, and Strawser (1987), Sami and Schwartz (1992), and Harper, Mister, and Strawser (1991).

Some studies have focused on alternative methods of presentation for the statement of cash flows. Klammer and Reed (1990) show that there is less variability in the size of bank loans that are granted when bankers receive direct method cash flow statements as opposed to indirect method cash flow statements, suggesting that the direct method is more advantageous to the applicant. Consistent with this finding, Jones and Widjaja (1998) indicate than a majority of loan officers surveyed prefer the direct method for cash flow statements over the indirect method.

Two studies have examined the effects of using accrual accounting versus other forms. Riahi-Belkaoui (1992) showed experimentally that loan officers clearly preferred companies whose financial statements were prepared using accrual accounting over companies that used a modified cash basis of accounting. In contrast, Baker and Cunningham (1993) found no difference in assigned loan interest rates between borrowers whose financial statements were prepared according to accrual accounting versus those whose financial statements were prepared using income tax accounting.

Various other studies have investigated alternative treatments of specific accounting issues. Wilkins and Zimmer (1985) find that most lenders did not adjust for alternative methods of accounting for borrowers' investments in associates (cost versus equity methods), and that assessments were affected by the accounting method used. Similarly, Trotman and Zimmer (1986) show that loan officers with experience lending to construction companies were unlikely to adjust for alternative methods of recognizing revenues (completed contracted basis versus percentage of completion basis). Davis, Lovata, and Philipich (1993) examined alternative treatments of contingent liabilities (presented in financial statements as well as in supplemental disclosures, presented in supplemental disclosures only, or not disclosed) and flood losses (extraordinary – following income before extraordinary items, unusual – before income before extraordinary items, or part of operating expenses). Results indicate that once a contingency is footnoted, the credit terms remain constant regardless of whether or not it is booked. Also, credit terms do not change when a loss is reported as an operating expense or as an unusual/infrequent item, but they are adjusted when shown as an extraordinary item. Catasús and Gröjer (2003) find that the treatment of costs dealing with intangibles (i.e., whether or not they are capitalized) did not affect lending decisions. Viger, Belzile, and Anandarajan (2008) examined stock option reporting and demonstrate that lenders assess higher risk, a more pessimistic trend rating, are less likely to grant credit, and charge a higher risk premium when stock options are expensed on the income statement. These judgments did not differ, however, for two methods of footnote disclosure that did not involve expensing on the income statement.

None of these studies on the influence of accounting methods has examined inventory accounting or accounting for property, plant, and equipment. Does the use of FIFO versus LIFO matter to lenders? Does the method of depreciation for buildings and equipment make a difference in lending decisions?

Loan Default/Bankruptcy Judgments

Though loan default likelihoods and bankruptcy judgments are not lending judgments per se, these assessments and judgments are implicitly involved in lending decisions because lenders assess a company's viability from the standpoint of being able to service debt. Bankers would not ordinarily want to make loans to companies that would likely become bankrupt or otherwise default on loans.

Several studies have focused on the use of financial ratios by commercial lenders. Libby (1975) demonstrates that a small set of accounting ratios allowed loan officers with widely varying backgrounds to make very accurate and reliable predictions of business failure. Casey (1980a) extended the Libby (1975) study by using different time periods, financial ratios, non-accounting data, and task procedures. Findings are similar to Libby (1975) regarding intersubject agreement and perceived ratio weights, but lenders' predictive achievement was lower than in Libby (1975) due to poor performance on bankrupt firms. Like Libby (1975), but in contrast to Casey (1980a), Zimmer (1980) shows that financial ratios based on conventional accounting information are useful to lenders in predicting corporate failure.

Some of the prior research has compared the performance of lenders to mathematical models. Libby (1976) developed linear models from loan officers' predictions of business failures based on a selection of ratios drawn from financial statements. These linear models proved to be excellent predictors of loan officers' responses. However, the loan officers outperformed their linear models. Zimmer (1981) replicated the Libby (1976) study using Australian loan officers and obtained contrasting results. Most lenders were outperformed by the models developed from the same set of predictions, and the mean accuracy of the models was higher than that of the lenders.

Other studies have examined the amount or type of accounting information provided to lenders. Regarding the amount of accounting information, Casey (1980b) studied the effects of accounting information load on lenders' abilities to predict bankruptcy. Results indicate that lenders with the heaviest information load were not more accurate in their predictions than lenders with a lesser information load, but they took more time to process the information. Belkaoui (1984), however, finds that adding redundant accounting information to diagnostic accounting information improved the accuracy of loan officers' predictions of bankruptcy. Apparently, the redundant information had a reinforcing effect. As for effects of the type of accounting information, Abdel-Khalik and El-Sheshai (1980) show that loan officers' choice of financial information, rather than their weighting of the chosen cues, was the limiting factor in predicting default for nonpayment of debt. Casey (1983) demonstrates that disclosure of the objective prior probability of failure did not impact lenders' predictions of corporate failure.

These studies on loan default and bankruptcy judgments were conducted in the 1970s and 1980s. It would be interesting to see whether the bankers' judgments are quite different three or four decades later.

Decision Processes

A number of studies have focused on commercial lenders' processesing of accounting information. These studies examine processing strategies, stages of processing, cues searched and processed, and consistency in processing.

Regarding processing strategies, Casey (1980a) examined lenders' information processing styles in using financial ratios to predict corporate failure. Lenders classified as intuitors focus on relationships, whereas those classified as sensors prefer to analyze isolated, concrete details in making decisions. Results show that intuitors performed better than sensors. Biggs at al. (1985) report that when faced with tasks of greater size, loan officers' increased their use of noncompensatory decision strategies, in which a high value on one dimension cannot offset or compensate for a low value on another dimension. Lenders increased their use of compensatory strategies when the profiles of loan applicants (i.e., financial statement information) were similar.

Several studies have analyzed multiple stages of processing accounting information by lenders. Rodgers and Housel (1987) develop and test a two-stage cognitive processing model that considers the simultaneous effects of direct (i.e., perception affecting decision choice) and indirect (i.e., perception affecting judgment which affects decision choice) cognitive processes on loan decisions. Results indicate that during the first stage, conceptually-driven and data-driven perceptual biases caused different assessments of financial statement information. Then, judgments made during the second stage affected loan decisions. A conservatism bias was also evident. Rodgers (1991), using the two-stage model of Rodgers and Housel (1987), find that data-driven type lenders' access to more parallel processing cues may partially explain why they outperformed conceptually-driven type lenders on loan decisions. Also, conceptually-driven types were more conservative in their loan decisions than were data-driven types. Danos, Holt, and Imhoff (1989) also examined the use of accounting information in sequential judgments of loan officers. Results suggest that lenders reach a high level of confidence in their credit granting decisions very early in the information gathering and evaluation process. Confidence in their judgments at subsequent stages of the process are materially altered by more detailed forms of accounting data. Even when subsequent information disconfirms prior judgments, lenders revise their confidence consistent with the nature of the subsequent evidence. That is, they do not ignore disconfirming evidence once a strong initial impression has been formed.

Related studies have investigated the consistency of evidence. Beaulieu (1996) finds that loan officers recall more accounting information when it is consistent with their loan decisions as compared to when the information is inconsistent. Guiral-Contreras, Gonzalo-Angulo, and Rodgers (2007) show that when lenders are faced with an audit report that is contrary to that of the financial evidence, a recency effect is observed. This suggests that the order in which an audit report is processed may influence lending decisions.

Other studies have investigated issues pertaining to the number of accounting information cues processed by lenders. Stocks and Harrell (1995) examine the effects of increasing information levels (six cues vs. nine cues) on the judgments reached by individual and groups of loan officers. Individuals experienced more information processing difficulties than groups as information level increased. Furthermore, groups reached judgments of higher quality than individuals at both information levels. Andersson (2004) uses a process-tracing approach to study acquisition of financial information by senior loan officers, junior loan officers, and business students in the context of a lending decision. Results indicate that the senior loan officers searched for significantly more financial cues than the two groups of less experienced participants.

ASSURANCE ISSUES AND LENDING

Issues Pertaining to Assurance Providers

Auditor Independence

Much of the credibility associated with audited financial statements is attributable to the auditor being independent from its client. Numerous researchers have examined loan officers' perceptions and decisions relating to auditor independence.

Several studies have investigated the impact of auditors' provision of management advisory services to clients (prospective borrowers) on lenders' perceptions and lending decisions. Shockley (1981) finds that CPA firms providing management advisory services, as well as CPA firms operating in highly competitive environments, were perceived by bank lenders as having a higher risk of independence impairment. Consistent with these findings, Bakar, Rahman, and Rashid (2005), in a survey of bank loan officers, show that provision of management advisory services, audit firms operating in more competitive environments, audit firms serving a client over a longer time period, higher audit fees, and lack of audit committees all are associated with perceptions of reduced auditor independence.

On the other hand, McKinley, Pany, and Reckers (1985) indicate that CPA firms' provision of management advisory services did not affect bank loan officers' perceptions of independence or financial statement reliability, nor did it influence loan decisions. Similarly, Bandyopadhyay and Francis (1995) find that neither loan approval rates nor interest rates were affected by loan applicants' auditors providing management advisory services to the applicants. DeZoort, Holt, and Taylor (2012) show that lenders' evaluations of auditors' expertise, integrity, and independence affects their assessments about auditor objectivity. However, like McKinley, Pany, and Reckers (1985) and Bandyopadhyay and Francis (1995), they find that lenders perceive no decrease in auditor objectivity when independence rules are violated by combining audits with non-audit services for loan applicants.

These mixed findings on management advisory services are reinforced by the mixed results within Colbert, Murray, and Nieschwietz (2011), as well as in Guiral, Ruiz, and Choi (2014). Colbert, Murray, and Nieschwietz (2011) find no association between auditors' provision of financial information systems development services to loan applicants and lenders' perceptions of auditor independence or loan decisions. However, they did find that auditors' provision of tax services to borrowers negatively affects lenders' perceptions of auditor independence as well as lending decisions. Guiral, Ruiz, and Choi (2014) demonstrate that the impact of auditor economic dependence, operationalized as the effect of providing both audit and non-audit services, on lending decisions, depends on the type of audit opinion issued. When an unqualified but modified opinion that reflect's the auditor's concern about the borrower's ability to survive is issued, auditor economic dependence has a negative effect on lenders' perceptions of the borrower's risk of repayment and lending recommendations. If, however, the borrower receives a qualified opinion that reflects the auditors' concern not only about the company's ability to survive, but also on the financial statements' departure from GAAP, auditor economic dependence does not impact lenders' perceptions of risk or loan recommendations. This suggests that the qualified opinion alone is enough for lenders to evaluate the borrower.

In the above studies, the auditor provides both assurance services and management advisory services to their clients. In another type of setting, Lowe and Pany (1995) investigate bankers' independence judgments and loan decisions when a CPA firm performs consulting services *together* with a an audit client rather than for the client. They find that when a CPA firm's consulting engagement with its client is financially material, lenders' perceptions of financial statement reliability and auditor independence, as well as loan decisions, are adversely impacted.

Another form of independence impairment may result when a CPA firm provides outsourced internal audit services for its client. Lowe, Geiger, and Pany (1999) finds that loan officers assigned low auditor independence ratings, financial reliability scores, and loan approval rates to cases in which the external auditor performed management functions for outsourced internal audits. The highest independence ratings, financial reliability scores, and loan approval rates were given for cases in which internal audits are outsourced to their external audit firm and different personnel are used for the internal and external audits.

Some studies have examined the impact on lenders of an auditor's revenue dependence on a client (the prospective borrower). Gul (1991) shows that when a client's fees are a large portion of its audit firm's total revenues, bankers' perceptions of the auditor's ability to withstand management pressure are adversely affected. In contrast, Schneider (2010) demonstrates that lenders' decisions are not affected by knowledge about the size of a client's audit fees or by the auditor's revenue dependence on a client.

One study has examined the effects of audit firm rotation and auditor tenure on lenders' perceptions of auditor independence. Daniels and Booker (2011) show that loan officers do perceive enhanced auditor independence when borrowers have an audit firm rotation policy. However, length of auditor tenure does not impact lenders' perceptions of auditor independence.

A number of studies have examined multiple types of auditor-client relationships that potentially impair independence. Lavin (1976) examined lenders' perceptions of auditor independence relating to 12 scenarios involving auditor-client relationships and found that the lenders lacked consensus in only two of the 12 scenarios. Firth (1981) investigated the impact on lending decisions of eight auditor-client relationships that might impair auditor independence. Findings indicated that seven of the eight relationships reduced bankers' perceived confidence in the company's financial statements and maximum loan amounts were lower than if the company had an independent audit. Dykxhoorn and Sinning (1982) surveyed bankers about 27 situations involving auditor-client relationship issues and found that for 26 of those situations, the loan officers' perceptions of auditor independence affected their lending decisions. Bartlett (1993) compared bankers' and CPAs' perceptions of auditor independence and found that for eight of ten situations (including all four scenarios involving management advisory service engagements), bankers perceived a greater threat to auditor independence than did the CPAs. Also, among bankers, results indicated that more knowledge of accounting did not result in postive evaluations of auditor independence.

Since the Sarbanes-Oxley Act of 2002 has greatly restricted audit firms' provision of management advisory services, future lending research will likely not focus on this aspect of auditor independence. Instead, much discussion in recent years has centered on audit firm tenure and rotation issues. The only relevant lending study in this area is the one by Daniels and Booker (2011), which dealt only with bankers' perceptions of auditor independence. Studies are needed to examine the effects of rotation and auditor tenure on loan decisions.

Quality of Auditor

Lenders' reliance of audited financial statements may be influenced by the quality of the auditor associated with them. Several studies have investigated lenders judgments relating to auditor quality. Most of these studies have proxied CPA firm size for auditor quality, as prior research finds that Big N auditors (Big Eight, Six, Five, Four) provide higher quality services than other auditors and that users' perceive a quality difference (e.g., Teoh and Wong 1993, and Becker et al. 1998).

Shockley (1981) finds that smaller CPA firms are perceived by bank lenders as having a higher risk of impairment of independence. Similarly, results from Bakar, Rahman, and Rashid (2005) reveal that smaller audit firms are associated with lenders' perceptions of losing auditor independence. Consistent with these perception studies, Kim, Song, and Tsui (2013) show that loan interest rates are lower for borrowers with prestigious Big 4 audit firms than for borrowers with non-Big 4 firms. Also, longer client-auditor relationships are associated with lower loan interest rates. Corroborating these studies' findings, Kim and Song (2011) demonstrate that a larger number of banks participate in syndicated loans to borrowers with Big N auditors than those with other auditors. Also, the percentage of syndicated loan retained by the lead bank(s) is smaller when the borrower has a Big N auditor. In contrast to these studies, McKinley, Pany, and Reckers (1985) find that although loan officers consider Big 8 firms more independent and believe that they provide more reliable audited financial statements than do other CPA firms, these differences did not result in different lending decisions.

Two studies have focused on CPA firm reputation and reliability not necessarily related to firm size. Miller and Smith (2002) show that bank loan decisions are not affected by whether the applicant's CPA firm is a large international one with a good reputation or a local one with an unknown reputation. However, DeZoort, Holt, and Taylor (2012) find that lenders' assessments of auditor reliability are positively associated with assessments of financial reporting reliability, which in turn, is negatively related to their evaluations of loan default risk.

Two studies have focused on auditor industry expertise. Zhang, Sun, and Xian (2017) demonstrate that companies hiring industry-specialist auditors receive lower interest rates, fewer loan covenants, and lower likelihoods of having to provide secured collateral for loans. Chin, Yao, and Liu (2014) examine whether industry expertise at the partner level is valued by lenders in a syndicated loan market. They find that the share of a syndicated loan retained by the lead arrangers is smaller for borrowers having industry audit experts as their engagement partners. Also, the number of participating lenders and the loan amounts are larger for borrowers with industry audit experts as their engagement partners. While this study demonstrates the benefits of disclosing the the engagement partner and his/her expertise, future research could also investigate the costs of doing so (e.g., increased litigation risk).

Future studies should examine the association between lending decisions and other measures of auditor quality besides CPA firm size and industry expertise. Other measures might include ratios of partners to staff, personnel turnover, average years of experience, and training hours per audit professional.

Providing Assurance

Financial Statement Audits and Opinions

Many studies have addresssed the impact on lending judgments of financial statement audits and audit opinions. Most have focused on issues pertaining to various types audit opinions, but three studies have examined whether or not borrowers' financial statements accompanied by audits are useful.

An analytical model by Dharan (1992) demonstrates that a necessary condition for small companies seeking bank loans to prefer having an audit over not having an audit is that the borrower's debt to equity ratio must be above a certain minimum level. This level depends on the borrower's initial wealth, the borrower's risk preferences, the investment return distribution, and the cost of the audit. While this study focuses on usefulness from borrowers' perspectives, two studies address usefulness from lenders' perspectives. Berry et al. (1984) find that over 70% of the surveyed bankers considered audited financial statements to be more important than corresponding internal financial statements of loan applicants. Corroborating this finding are results shown by Blackwell, Noland, and Winters (1998), who obtained data from bank loan files and found that borrowers having audited financial statements pay lower interest rates than nonaudited borrowers, and that this benefit decreases nonlinearly as the size of the borrower company increases.

Qualified/Modified or Disclaimers of Audit Opinions Useful

A number of researchers have found that the various different types of audit opinions are useful to lending officers. Some of these studies have analyzed the effects of qualified audit opinions.

Firth (1979) and Firth (1980) both report the results of a study that tested the effects of qualified audit opinions on lending decisions. Findings indicate that bankers lowered their maximum loan amounts for companies that had going concern or asset valuation qualifications. Gul (1987) finds that bankers' perceptions of risk and their demand for additional information required both increased when borrowers' financial statements were accompanied by "subject to" audit qualifications. Geiger (1992) shows that, in cases involving changes in accounting principles, bankers receiving "except-for" qualified opinions relating to loan applicants' financial statements were less likely to grant loans and assigned higher interest rates than those receiving Statement on Auditing Standards (SAS) 58 consistency reports, which have superseded "except-for" qualifications. Guiral-Contreras, Gonzalo-Angulo, and Rodgers (2007) demonstrate that qualified audit reports are useful in loan rating decisions when they are contrary to favorable financial evidence. Results from Guiral, Ruiz and Choi (2014) reveal that a qualified opinion that reflects the auditor's concern not only about the ability of the company to survive, but also on the financial statement's departure from GAAP, negatively impacts lenders' risk evaluations and lending recommendations.

In addition to investigating the effects of qualified audit opinions, Libby (1979a) studies opinion disclaimers by examining bankers' and auditors' perceptions of various audit reports involving scope limitations and uncertainty qualifications. Tests of differences between bankers and auditors revealed no large differences. Results indicated that the difference between qualified and disclaimer reports was viewed as much greater than the difference between unqualified and qualified reports. Regarding disclaimers, perceptions differed between circumstance-imposed and client-imposed scope limitation reports. Also, the unaudited disclaimer was perceived as conveying a message similar to the client-imposed scope disclaimer.

Also studying the effects of disclaimers of opinions, Duréndez Gómez-Guillamón (2003) conducted a survey of bankers and find that the type of audit opinion (clean, qualified, adverse, or disclaimer) influences their lending decisions. Regarding qualified opinions, lenders generally agreed that going concern uncertainties have the most influence on lending decisions. LaSalle and Anandarajan (1997) find that for both litigation uncertainties and going concern uncertainties, a disclaimer of opinion, rather than an unqualified opinion accompanied by an explanatory paragraph, reduces lenders' willingness to grant credit.

Two other studies have examined the effects of unqualified audit opinions that include explanatory paragraphs. Bamber and Stratton (1997) find that uncertainty-modified audit reports containing explanatory paragraphs affected loan officers' assessments of risk, interest rate premiums, and credit granting decisions. Chen et al. (2016) report that loans made in the year after an audit opinion modified by an explanatory paragraph is issued, compared with loans made in the year after a clean opinion, are associated with higher interest spreads. Furthermore, the spread size effect varies by type of modified audit opinion, ranging from no effect for an accounting change to a mean increase of 107 basis points for a going concern opinion.

Qualified/Modified Audit Opinions Not Useful

In contrast to the studies discussed above, other researchers have failed to produce evidence supporting the usefulness of different types of audit opinions. Estes and Reimer (1977) examined whether loan officers would lend less money to a company that received a qualified opinion than to an identical company that received a clean opinion and find no difference in the amounts the bankers were willing to lend. Similarly, results from Houghton (1983) reveal that qualified audit opinions did not significantly impact loan approval decisions.

Libby (1979b) showed that while disclosure of uncertainties due to contingencies affected bankers' assessments of risk, the addition of "subject-to" audit opinions did not influence these judgments. Since Libby (1979a) found that the uncertainty qualification alone increased bankers' perceptions of loan risk, it appears that lenders find the auditor's uncertainty qualification to be redundant information when they are also provided with the uncertainty disclosures. Abdel-khalik, Graul, and Newton (1986) extended the Libby (1979b) study in a Canadian setting. Consistent with that study, they found that financial statement disclosures of contingencies accompanied by "subject-to" audit opinions had no significant additional effect on lenders' risk assessments.

Lin, Tang, and Xiao (2003) show that while lenders perceived a qualified audit opinion to have a negative impact on the credibility of financial statements, no difference was found in their credit decisions involving financial statements accompanied by unqualified versus qualified opinions. Bessell, Anandarajan, and Umar (2003) examine whether "emphasis of matter" modifications and "except for" qualifications have information content. Findings indicate that for a company in financial distress, neither of these modifications/qualifications enhanced bankers' perceptions of risk or lending decisions.

As detailed above, many studies have found that the type of audit opinion affects lenders perceptions and decisions while other studies have failed to find such effects. Future research should attempt to reconcile these conflicting results by addressing under what conditions lending is affected by the type of audit opinion.

Qualified Audit Opinions – Other Issues

Two studies have examined how lenders' tolerance for ambiguity influences judgments in the context of qualified audit opinions. Gul (1986) investigated the interacting effects of tolerance for ambiguity and type of audit opinion on bankers' confidence in the correctness of their loan granting decisions. Results showed that those low on tolerance for ambiguity were less confident than those high on tolerance for ambiguity when the audit opinion was qualified. However, there were no differences in confidence when the audit opinion was unqualified. The implication is that the uncertainty created by the qualified report leads to different levels of confidence depending on whether the bankers have high or low tolerance for ambiguity.

Tsui (1993) provided bankers with financial information accompanied by a "subject to" audit qualification based on uncertainty regarding pending litigation. Findings indicated that bankers' tolerance for ambiguity affected their perceptions of loan risk, with those who have low tolerance for ambiguity requiring higher interest rate premiums than those who have high tolerance for ambiguity. Future research should examine how other personality variables besides tolerance for ambiguity impact lending judgments in the context of different types of audit opinions.

Audit Report Disclosures, Content, and Linguistic Attributes

Several researchers have examined lenders' judgments pertaining to the information contained in audit reports and how the information is worded. Some studies have focused only on general communication and quality of the audit report, while others have addressed lenders' perceptions about the auditor's responsibilities.

Gray et al. (2011) conducted focus groups, which included nine bankers, to obtain perceptions about information conveyed in audit reports. A general finding was the lack of consensus as to the intended communication of the auditor's report. Boolaky and Quick (2016) investigated German bankers' perceptions on issues relating to expanding the information provided in the financial statement audit report. Findings indicated that disclosure of the applied assurance level had a positive effect on perceived audit reporting quality and increased the probability of granting credit. However, disclosing applied materiality levels and key audit matters had no influence. Future research should examine the effects of other types of disclosures.

Regarding bankers' perceptions of auditors' responsibilities, Kelly and Mohrweis (1989) compared loan officers' perceptions of wording contained in audit reports after issuance of SAS 58 with wording prior to that. The SAS 58 wording was found to enhance the understandability of the audit purposes as well as the responsibility of management for the financial statements. Also, bankers perceived auditors as having less responsibility with the SAS 58 wording than with the previous wording. Miller, Reed, and Strawser (1993) extended the Kelly and Mohrweis (1989) study to include qualified audit reports in addition to unqualified reports. Findings indicated that the new audit reports increased the ability to identify both management's and the auditor's responsibilities relating to financial statements. The finding relating to management is consistent with Kelly and Mohrweis (1989), but the finding relating to auditors is not. Miller, Reed, and Strawser (1993) also demonstrated that the communication of audit scope limitations was enhanced by the wording in the new audit reports. Gay and Schellugh (1993) showed that the changed wording of the longform audit report in Australia increased lending officers' understanding of the role of the auditor, as well as the nature of the audit process and financial reporting process.

Internal Control Reports

The Sarbanes-Oxley Act of 2002 mandates that certain companies provide disclosures about their internal controls over financial reporting and that auditors attest to the fair presentation of these disclosures. Regarding disclosures, Kim, Song, and Zhang (2011) find that bank loan spreads are higher for firms disclosing internal control weaknesses. Moreover, firms with more severe, company-level internal control weaknesses incur higher loan rates than those with less severe, account-level internal control weaknesses.

Other studies have examined bankers' judgments when loan applications are accompanied by audit reports on the prospective borrowers' internal controls. Two studies have examined the understandability and reliability of internal control audit reports. Gist, McClain, and Shastri (2004) surveyed bankers and auditors and found that both groups believed that the message and purpose of internal control reports are in need of improvement. Bankers, though, provided higher ratings than auditors regarding understandability of the report's message and clarity as to the purpose of the audit of internal control structure. Foster et al. (2005) showed that internal control reports without a limitations paragraph would enhance bankers' perceptions of the report's reliability and that bankers perceive auditors to assume a lower level of responsibility when issuing internal control reports with a limitations paragraph.

One study has investigated the impact of an unqualified versus adverse internal control audit opinion. Schneider and Church (2008) found that lenders' assessments of the risk of extending a line of credit and the probability of extending the line of credit are negatively affected when the borrower receives an adverse internal control opinion as compared to an unqualified one. These effects are not lessened by the use of a Big Four auditor as opposed to a non-Big Four firm.

Since two forms of internal control weaknesses may be disclosed, significant deficiencies and material weaknesses, future research could address whether lenders distinguish between these two types. Furthermore, when clean internal control audit opinons are issued, are lenders' decisions affected by the disclosue of significant deficiencies?

<u>Limited Assurance Engagements</u>

Audits, Compilations, and Reviews

In addition to audits of financial statements, CPA firms also provide limited assurance services in the form of complations and reviews. Some studies have examined bankers' (and CPAs') understanding and perceptions of assuance provided by these services. Other studies have investigated whether lending decisions are affected by the type of CPA firm assurance service.

Kim and Elias (2007) find that bankers perceive financial statements prepared by loan applicants differently from those involving a CPA firm, but bankers' perceptions did not differ among compilations, reviews, or audits. Several studies compare bankers' judgments with those of CPAs. In Edmonds, Potter, and Weiss (1981), bankers demonstrate a high level of knowledge about the professional standards pertaining to audit, compilation, and review reports, and their perceptions are consistent with those of CPA respondents. Nair and Rittenberg (1987) had bankers and CPAs rate the similarity of the message communicated in nine different variations of audit, review, and compilation reports. Like Edmonds, Potter, and Weiss (1981), they found that the overall understanding of the reports by both groups was quite high and quite consistent. However, there were important disagreements on analysis of adjective phrases relating to compilations and reviews between both bankers and CPAs. Furthermore, bankers place more responsibility for the financial statements on auditors versus management than did the CPAs. Mayper, Welker, and Wiggins (1988) also compare perceptions of audit, compilation, and review reports between CPAs and bank loan officers. While both groups perceived the relationships between the reports similarly, some characteristics were interpreted differently. Bankers appeared to misperceive the auditor's role in review reports, while auditors appeared to believe that users overrely on reviews and compilations. Unlike these studies, Bartlett (1991) finds stark differences between views of bankers and auditors. His survey revealed that CPAs believe they provide higher levels of assurance with audit reports than bankers feel they receive. On the other hand, bankers believe they receive greater assurance from non-audit reports (various forms of compilations, reviews, and unaudited reports) than CPAs feel they provide.

The research involving lending decisions relating to limited assurance services is very mixed. Johnson, Pany, and White (1983) find that while audits are perceived by loan officers to be of higher quality than compilations, reviews, or statements with no auditor association, no significant differences were noted for credit granting decisions, including interest rates. Wright and Davidson (2000) examine the effects on commercial lending decisions of audits, reviews, and no auditor association with financial statements. Results showed that neither the existence nor type of attestation affected lenders' risk judgments. Moreover, while risk assessments were associated with loan approval decisions, neither the existence nor type of attestation affected loan approval decisions. While these two studies indicate that types of assurance do not impact lending decisions, other studies do find effects.

Baker and Cunningham (1993) demonstrate that lenders assign higher interest rates for loan requests accompanied by reviewed financial statements than for those accompanied by audited financial statements. Bandyopadhyay and Francis (1995) show that loans are more likely to be made and a lower interest rate charged as the level of auditor assurance increases from compilations to reviews to audits. Highlighting the divergent findings of these studies on limited assurance services, Miller and Smith (2002) find that the type of CPA firm report (audit, review, compilation, no report) has an impact on the loan amount, but not on the interest rate or the decision about whether to grant credit.

All of these studies on the comparisons of audits, reviews, and compilations were conducted over 15 years ago. With changes that have taken place in the banking industry and lending practices over the past two decades, researchers should take a fresh look at how audits, reviews, and compilations affect lenders' perceptions and decisions.

Other Limited Assurance Engagements

Pillsbury (1985) asked bankers and auditors to rate the similarity of assurance associated with eight different forms of limited assurance engagements including audits, compilations, various reviews (interim reviews and reviews of forecasted financial statements), and other limited assurance engagements (e.g., contractual compliance). Findings indicated differences between the way bankers and auditors perceive the assurance intended by limited assurance engagements. Specifically, auditors perceived a higher level of assurance for reviews of forecasted financial statements than did bankers. On the other hand, bankers perceived a higher level of assurance for interim reviews than did auditors.

Other studies have focused on just one type of limited assurance engagement. Johnson and Pany (1984) found that CPA reviews of forecasted financial statements did not increase loan officers' perceptions of forecast accuracy, and furthermore, did not affect loan decisions. Strawser (1994) also conducted a study dealing with forecasted financial statements and showed that, in comparison to no accountant involvement or a compilation service, a higher probability of a more favorable lending decision resulted when the accountant performed an examination of the forecasted financial statements. Furthermore, this probability was even higher when the same accountant had performed an audit on the borrower's historical financial statements.

Yardley (1989) examined how lenders and CPAs interpret the assurance provided by prescribed procedures in limited assurance engagements that result in the expression of negative assurance by CPAs. Both lenders and CPAs perceived that the assurance provided by the performance of specified procedures is not a uniform level across clients.

All four of these studies on other limited assurance engagements were conducted in the 1980s and 1990s, so more up to date research is needed. Furthermore, the studies that investigated interim reviews and prescribed procedures addressed only bankers' perceptions about assurance provided by these services. Future research should examine loan decisions in the context of these CPA firm services.

Other Assurance Issues

Besides issues relating to assurance providers and assurance reports, researchers have examined lending judgments pertaining to other assurance issues. Several studies have addressed auditors' prevention and detection of fraud. Salehi and Azary (2009) survey of bankers found that 70% believe auditors are responsible for fraud prevention and detection. Comparing perceptions of both bankers and auditors, Best, Buckby, and Tan (2001) indicate that bankers were more inclined than auditors to believe that the auditor is responsible for detecting all fraud. In a study involving internal auditing, James (2003) surveyed lending officers and found that in-house internal auditors reporting to senior management are perceived as less able to provide protection against fraudulent financial reporting compare to in-house internal auditors reporting solely to audit committees. No difference, however, was found for lenders' perceptions of fraud prevention between outsourced internal auditors and in-house ones when both report to audit committees.

Several commercial lending studies have focused on the effects of borrowers changing their auditors. Schneider (2013) investigated the impact of auditor dismissals and resignations on lending decisions and found that risk assessments and probabilities of granting credit did not differ due to knowledge about auditor changes. Also, lenders did not perceive auditor resignations differently from auditor dismissals and disclosure of a disagreement as a reason for an auditor change did not affect lending decisions. In contrast, Francis et al. (2017) document average loan spread increases of 22 percent within a year after auditor changes, as well as higher upfront and annual fees together with higher probabilities of pledging collateral. Moreover, the increased spreads are significant for auditor resignations as well as for client-initiated auditor changes, with or without auditor disagreements. Schneider (2017) showed that neither lenders' risk assessments nor probabilities of granting credit differ for companies that switch auditors from Big 4 firms to regional firms as compared to companies that do not switch auditors. Furthermore, for companies that do make these auditor switches, providing a reason for the switch does not influence lending decisions.

Two studies have addressed issues relating to audit committees of loan applicants. Francis et al. (2012) show that audit committee size, audit committee independence, and the presence of financial experts on audit committees reduce bank loan prices. Schneider (2018) focuses only on financial expertise of audit committees and differs from Francis et al. (2012) by using an experimental, rather than an archival, approach and by operationalizing the financial expertise as accounting experts rather than non-accounting experts. Schneider (2018) finds that while the existence of audit committee financial expertise does not affect lending decisions, financial expertise influences loan decisions in situations where audit commmittee members have been replaced.

Knapp (1985) investigated loan officers’ perceptions of auditors’ ability to resist client pressure in auditor-client conflict situations. Lenders perceived a client in good financial condition to be more likely to obtain its preferred outcome in a conflict than a client in poor financial condition. Also, lenders believed that clients would be more likely to obtain their preferred outcome in conflicts when conflict issues are not dealt with precisely by technical standards.

In a study involving peer and quality reviews of CPA firms, Schneider and Ramsay (2000) find that while having peer reviews or quality reviews of CPA firms associated with audited financial statements does increase lenders’ confidence in the financial statements, these reviews do not affect lenders’ willingness to approve lines of credit or the size of the lines of credit approved.

CONCLUSION AND FUTURE RESEARCH

This paper has examined two streams of commercial lending research. The first involves how accounting information impacts lending judgments, with most of the studies focusing on the usefulness of accounting data or the effects of different accounting methods on loan officers' decisions. Other studies involve lenders' bankruptcy/default judgments or their decision processes. The second research stream deals with the effects of various forms of assurance services on lending judgments. Most of these studies investigate issues relating to providing audits, internal control reports, and limited assurance engagements. Other studies on the effects of assurance services mainly focus on the independence or quality of the assurance providers.

Notably absent in the body of literature dealing with how accounting information impacts lending judgments is research on the effects of GAAP versus International Financial Reporting Standards. Also, no studies have examined lenders' judgments concerning GAAP measures versus their related non-GAAP measures. In the area of assurances services, research has focused on external audits, but is lacking on the impact of internal auditing on lending decisions. Future research should address whether the existence and quality of a loan applicant's internal audit function matters to lenders.

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