

# **Qualified Audit Opinions and Debt Contracting**

Presented by

**Dr Derrald Stice**

**Assistant Professor  
Hong Kong University  
of Science and Technology**

**#2013/14-03**

The views and opinions expressed in this working paper are those of the author(s) and not necessarily those of the School of Accountancy, Singapore Management University.

# Qualified audit opinions and debt contracting

**Peter F. Chen**

School of Business & Management  
Hong Kong University of Science & Technology  
acpchen@ust.hk

**Shaohua He**

School of Business & Management  
Hong Kong University of Science & Technology  
ache@ust.hk

**Zhiming Ma**

School of Business & Management  
Hong Kong University of Science & Technology  
accma@ust.hk

**Derrald E. Stice\***

School of Business & Management  
Hong Kong University of Science & Technology  
acstice@ust.hk

Draft: March, 2013

**JEL Classification:** G01, M4, M49

**Keywords:** Debt, Debt Contracting, Audit Opinions, Financial Reporting Quality

---

We appreciate comments and suggestions from workshop participants at the 2012 Brigham Young University Accounting Symposium and the 2012 Japanese Account Review Conference in Kyoto, Japan.

\*Address for correspondence: Department of Accounting, School of Business and Management, Hong Kong University of Science & Technology, Clear Water Bay, Kowloon, Hong Kong. Phone: 852-2358-7556. Email: acstice@ust.hk.

## **ABSTRACT**

We examine the effect of qualified audit opinions on private debt contracts. Consistent with the monitoring role of auditor opinions on accounting quality, we find that a qualified audit opinion is associated with an average increase of 18 basis points in the interest rate of loan facilities issued in the following year. We find that this effect persists for an additional three years in the interest rate for new loans. We also find evidence that lenders replace financial covenants with non-financial covenants following a qualified audit opinion of the borrower's financial statements. Furthermore, we also find that a qualified audit opinion is associated with a decrease in loan size and an increase in the likelihood of requiring collateral from the borrower, but we find no evidence that a qualified audit opinion is associated with a change in the length of loan maturity. Finally, we find that a qualified audit opinion is associated with a decreased use of financial ratios in performance pricing provisions. A variety of additional tests demonstrate that the effects of a qualified audit opinion on contractual terms are robust after controlling for other indicators of accounting quality such as abnormal accruals, volatility of accounting accruals and disclosure of internal control weakness. These results are not obvious given that private lenders have access to proprietary information unavailable to most market participants and suggest that auditors play a unique role in debt contracting through monitoring borrowers' financial reporting quality.

## **1. Introduction**

A fundamental feature of financial reporting is that an auditor is hired to attest to the quality of the financial statements prepared by management. The economic value of an audit opinion to users of financial statements is of great interest to academic researchers and accounting practitioners, especially in times when auditing is under considerable regulatory and public scrutiny (Francis, 2004; DeFond and Francis, 2005). In this study, we examine the economic role of the audit report by investigating how a qualified audit opinion (QAO, hereafter) affects the subsequent contracting in the private debt market.

The value of accounting information in capital markets, and especially of earnings to equity investors, has been one of the central issues in accounting research since Ball and Brown (1968) and Beaver (1968). Lev (1989) summarizes the accumulated evidence and concludes that the usefulness of earnings to equity investors is limited based on the low correlation between earnings and stock returns. Lev also conjectures that the low quality of earnings contributes to this low correlation. Given the unique role that auditors play in attesting to the quality of accounting information, there is surprisingly little evidence of the informativeness of the audit report to equity investors. The few exceptions examine the market reactions to first-time QAOs and find mixed evidence that the equity market reacts negatively, on average, to announcements of a QAO (Dodd et al., 1984; Choi and Jeter, 1992; Louder et al., 1992; Jones, 1999). The mixed evidence is partially attributable to the difficulty in employing a research design that can tease out the effects of audit opinions, earnings reports, and investors' expectations (Francis, 2004).

In this paper we investigate the role of auditor opinions in private debt contracting. We direct our investigation into the debt market for several reasons. First, debt covenants and performance pricing provisions are often contracted on in terms of financial statement

numbers (Leftwich, 1983; Dichev and Skinner, 2002; Asquith et al., 2005), and the violation of these covenants is costly (Beneish and Press 1993, 1995; Nini et al., 2009; Stice, 2012). However, the usefulness of accounting information in debt contracting is a function of the perceived quality of financial statement information. Bharath et al. (2008) provide evidence that a borrower's access to the private versus public debt market and its loan terms depend on the quality of the borrower's accounting information. Recently, Costello and Wittenberg-Moerman (2011) document that lenders trade-off between different monitoring mechanisms when financial reporting quality is in question. Specifically, they find that when borrowers disclose material internal control weaknesses (ICW, hereafter), lenders rely less on accounting and more on non-accounting-based terms in new debt issuances.<sup>1</sup> However, these studies do not examine how lenders respond to a borrower's change in accounting quality verified by a third-party, and thus it is difficult to infer causality. Given the unique role of auditors in certifying the quality of financial statements, investigating the usefulness of audit opinions to lenders in loan contracting can shed further light on the relation between accounting quality and debt contracting.

Second, because debt holders have asymmetric payoffs on firm performance, their investments are more sensitive to negative news (i.e. qualified audit opinions) than equity investors' investments. Accordingly, we expect lenders to make significant changes in loan contract terms following a borrower's qualified audit opinion. Third, we choose to examine the role of audit opinions in private debt contracts rather than in public debt contracts because private debt holders have access to information that is unavailable to public debt holders.

---

<sup>1</sup> Kim et al. (2011) and Dhaliwal et al. (2011) also investigate the effect of ICW on loan contracting. There are several differences between these three studies. While Costello and Wittenberg-Moerman (2011) focus their analyses on ICW disclosed under Sarbanes Oxley Act (SOX) Section 302 (unaudited), Kim et al. (2011) and Dhaliwal et al. (2011) conduct their tests using ICW reported under SOX Section 404 (audited). Additionally, while Costello and Wittenberg-Moerman and Kim et al. conduct their analyses using private debt, Dhaliwal et al. conduct theirs using public debt. All three studies conclude that the disclosure of ICW leads to an increase in the cost of debt.

This biases against finding an incremental value of audit opinions in the private debt market. As a result, our investigation into how private debt holders rely on audit opinions offers unique insights into the economic value of auditing in debt contracting.

The question we address is whether qualified audit opinions of borrowing firms lead to changes in the debt contract design of subsequent debt issuances. As capital providers, lenders are eager to price protect their investment against the various agency costs that arise during the life span of the debt. Accounting information plays an important role in reducing these agency costs during the debt-contracting process (Smith and Warner, 1979; Watts and Zimmerman, 1978, 1986, 1990). The higher the quality of accounting information, the lower the cost of monitoring the borrower's behavior, and the lower the interest rate demanded by lenders. Therefore, we predict that lenders demand a higher interest rate on debt following a QAO of a borrower.

In debt contracting, the interest rate alone is not effective in protecting the lender against all agency costs during the life span of the debt. Typically, debt contracts contain covenants that can be accounting-based such as debt-to-earnings ceilings. Alternatively, the lender can put in place general covenants such as restrictions on capital expenditures as a way to prevent asset substitution. An audit opinion is the final outcome of the auditor's assessment of the financial statement quality, and a QAO is an auditor's way of communicating with outside investors that the financial statement quality is lower than an unqualified opinion. Specifically, we predict that lenders choose to rely less on financial statement numbers after a qualified audit opinion and more on non-accounting monitoring mechanisms.<sup>2</sup>

---

<sup>2</sup> Throughout the paper we use the term "qualified" to denote an audit report that is not unqualified (ie. qualified opinion, disclaimer of opinion, adverse opinion, and unqualified opinion with additive language).

In addition to interest rates and covenants, lenders can adjust other terms of the debt contract to protect their investments. If a QAO leads lenders to suspect that the financial statement are less reliable predictors of future financial positions of the borrower, we predict that lenders will reduce the size of the loan, shorten the maturity of the loan, and be more likely to demand collateral. Finally, because lenders frequently use performance pricing provisions to control agency costs in debt contracts (Asquith et al., 2005) and many performance pricing provisions use financial statement ratios; we predict that lenders are less likely to use financial ratio-based performance pricing provisions in debt contracts if the borrower received a QAO.

We test our hypotheses using a comprehensive sample of firms with a QAO during the period from 1992 to 2009. We examine loan terms 1) during the QAO period, (from the first QAO until the first unqualified audit opinion is issued) 2) during the after-QAO period, (the three years after the QAO period) and 3) during all other periods (non-QAO period, hereafter). We find that the cost of debt issued after a QAO is higher than it was before the QAO. The interest spread (above LIBOR) of loans issued after a QAO but before a clean audit report is almost 18 basis points higher than it was during the period prior to the QAO, controlling for other determinants of the interest rate. Additionally, the interest spread of loans issued within the subsequent three years of the first clean audit report after a QAO is almost 9 basis points higher than loans before a QAO, indicating that the interest rate effects of a QAO persist even after a clean audit report. This indicates that there are long-term reputation effects on the cost of debt after a QAO.

Consistent with our hypothesis, we find that lenders decrease the use of financial covenants and increase the use of general covenants after a QAO. Specifically, lenders decrease the use of financial covenants by 4.4% during the QAO period, and increase the use

of general covenants by 2.6%. In testing our hypotheses regarding other terms of debt contracts, we find that lenders reduce loan size and increase the likelihood of requiring collateral, but we do not find any evidence that lenders shorten the maturity of the loan. Finally, we find that lenders reduce the inclusion of financial ratio-based performance pricing provisions in debt contracts. Specifically, lenders are less likely to include a performance pricing provision based on a financial ratio and are more likely to base it on a credit rating. We view this as evidence that lenders regard a QAO as an event which decreases the reliability of the financial statements in debt contracting and therefore trade off accounting-based contract components in favor of components not as affected by the change in perceived financial reporting quality.<sup>3</sup>

This study contributes to the literature in several ways. First, we extend the prior literature that investigates the role of auditors in capital markets. Auditors play an important role in an economy by providing a third-party assessment of publically traded firms. This allows investors to make investment decisions more efficiently by not requiring them to investigate each company individually. While the importance of auditors is widely accepted, there is little empirical evidence that directly examines whether auditors increase the perceived credibility of financial statements (Healy and Palepu, 2001). It is not clear how much information a QAO conveys that is not already known to the market (Dodd et al., 1984; Dopuch et al., 1986). We add to this literature by providing evidence that when auditors signal to the market that financial reporting quality is potentially low by issuing a QAO,

---

<sup>3</sup> Additionally, we predicted that a QAO would lead to an increase in information asymmetry between the lead arranger and other syndicate loan members and that this increase would lead to an increased pressure from syndicate members for the lead arranger to hold a higher proportion of the loan (Leland and Pyle, 1977; Holmstrom and Tirole, 1997; Ball et al., 2008). The lead arranger of a syndicate role plays a large role in both performing the due diligence before a loan issuance as well as in monitoring the loan afterward. This places the lead arranger in the best position to understand the possible consequences of a QAO on a borrowing firm. We found no evidence consistent with these predictions.

lenders drastically change the way that they use accounting information for debt contracting purposes, even after controlling for the information contained in the financial statements and its quality. This is not an obvious result in the private debt market. Loan syndicate members have access to private information unavailable to other market participants. Our finding that lenders change their contract design choices after a QAO indicates that auditors may be providing valuable information to a segment of the capital markets previously unidentified.

Our paper also extends the findings of Pittman and Fortin (2004) who find that the reputation of an audit firm, defining big six audit firms as those with the best reputations, reduces the cost of debt in a sample of young firms after an IPO. However, our study differs from theirs in several key ways; we use audit opinions directly as indicators of financial statement quality, and our research design allows us to infer causality between accounting information quality and the cost of debt. We find no significant difference between large (reputable) audit firms and small (less reputable) audit firms in the effect of a QAO on interest spreads, the use of covenants, and on other terms of debt contracts. In other words, conditional on a QAO being issued, we do not find a different economic impact of Big 4 versus non-Big 4 audit opinions on the contractual terms of private loans. As discussed later, this does not necessarily mean that our results contradict their findings since reputation may be conveyed through the differential willingness to issue QAOs between large versus small auditors. Furthermore, their sample of young firms is considerably different from our sample of firms.

Second, we add to the growing literature that examines the role of accounting, and specifically financial reporting quality, in debt contracting. Armstrong et al. (2010) call for further research exploring the effect of accounting quality on lenders' choice of monitoring mechanisms and the effects of accounting quality on borrowers' ability to access the debt

markets.<sup>4</sup> Costello and Wittenberg-Moerman (2011) show that a disclosure of internal control weakness under SOX Section 302 leads lenders to tradeoff between accounting and non-accounting debt contracting mechanisms. We provide further evidence that lenders trade off different control mechanisms using a sample of firms with QAOs as an indicator of low financial reporting quality. Like Costello and Wittenberg-Moerman (2011), we find that a QAO, as a signal of low quality of the reported financial statements, leads lenders to charge a higher interest rate, use fewer financial covenants, more likely to require collateral, and are less likely to include accounting-based performance pricing provisions. However, in contrast to their study, we find evidence that lenders increase their use of general covenants while decreasing their use of financial covenants. This likely arises from the fact that a QAO signals an *explicit deficiency* in financial statement quality as compared with a disclosure of internal control weakness.

Our study also contributes to the current debate about measures of financial statement quality. Since we include several indicators of accounting quality such as abnormal accruals and internal control weakness along with QAO in our final analysis, we find that the effects of a QAO are robust to controlling for these other indicators of accounting quality. At the same time, we find that a QAO does not subsume the effect of these other indicators on contract terms of the loan. This result suggests that abnormal accruals, internal control weaknesses, and QAOs capture different aspects of accounting quality and they do not subsume each other, at least in the context of private debt contracting.

In the next section we develop our hypotheses. We describe the sample selection procedures and variables used in this study in section 3. Section 4 presents the empirical

---

<sup>4</sup> In their review of 20 years of research in accounting, finance, and economics, Armstrong et al. (2010) were unable to locate any papers that examine whether attributes of firms' financial reports influence their ability to access the debt markets.

results of our hypotheses and section 5 presents the results of additional analyses. A summary and conclusions are provided in section 6.

## **2. Background and Hypothesis Development**

Financial statements are an important source of firm-specific information available to lenders at the contract date (Tirole, 2007). Accounting numbers have been used extensively to predict the likelihood of borrower default (e.g., Beaver, 1966; Altman, 1968; Ohlson, 1980). Research has shown that accounting measures can predict the losses that will be sustained by lenders in the event of borrower default (Varma and Cantor, 2005; Acharya et al., 2007), and recent work has demonstrated that accounting numbers also possess significant ability to predict future loss given default at the debt issuance date (Amiram, 2012).

The demand for monitoring to mitigate agency conflicts in debt contracting was first developed in the agency theory of the firm in finance and economics (e.g., Jensen and Meckling, 1976; Stiglitz and Weiss, 1981). Smith and Warner (1979), Watts and Zimmerman (1978, 1986, 1990), and others suggest that accounting information can play an important role in reducing agency costs in debt contracting. Lenders can protect their investment by monitoring and policing a borrower's behavior using accounting-based covenants such as dividend restrictions, debt-to-earnings ratio ceilings, and so on. Accounting information and its quality ought to play an important role in the design of debt contracts as lenders search for less costly monitoring mechanisms.

Relative to shareholders, lenders participate less in borrowers' economic gains but are adversely affected by economic losses. This asymmetric payoff creates a demand for accounting conservatism and debt contracts that allow for a timely transfer of control rights to

lenders in the event of bad news. Therefore, financial statements provide lenders information that can be used *ex ante* in debt contracting and *ex post* in debt monitoring. If lenders doubt the quality of financial statements then the cost of monitoring the borrower's behavior increases; and consequently, lenders demand a higher interest rate on the loan, all else equal (Jensen and Meckling, 1976; Smith and Warner, 1979).

To contract with lenders, managers have an incentive to commit themselves to high quality reporting by hiring independent auditors who will ensure that the financial statements comply with accepted accounting standards. Auditors play a central role in conveying information about firms to the market by certifying that a client's accounting numbers accurately reflect the state of the firm under the relevant set of accounting rules. This independent opinion of the financial statements, enforced through reputation and legal channels, is an essential ingredient in an efficient system of financial reporting and firm disclosure (Ball, 2001). When the auditor is able to give an unqualified opinion of a client's financial statements, rather than a QAO, it signals a high reliability of financial statements to market participants, such as lenders, when making lending and contracting decisions. Second, audited financial statement information reduces uncertainty about a borrower's creditworthiness. Borrower default is not the only risk that lenders face. Duffie and Lando (2001) model information risk as separate from risk of default. Easley and O'Hara (2004) and Lambert et al. (2007) predict that information risk will affect the cost of capital.

On the other hand, since lenders in the private debt market can request internal reports and have access to other sources of information that are not available to public investors, it is not obvious that lenders need to rely on the audit report to assess the quality of the financial statements. Therefore, whether or not and to what degree private lenders rely on auditors' reports is not obvious and remains an empirical question.

Consistent with the governance role of auditors in debt contracts, Leftwich (1983) finds that banks often require audited financial statements from private borrowers even when audited financial statements are not required by regulation. Mansi et al. (2004) find that the hiring of Big Six auditors is associated with a lower cost of debt. Similarly, Pittman and Fortin (2004) find that the hiring of large audit firms is associated with lower interest payments on debt for young firms.<sup>5</sup> Recently, several studies have used weaknesses in internal controls disclosed under the Sarbanes-Oxley Act as a proxy for low financial reporting quality and found that ICWs lead to an increase in the cost of debt (Costello and Wittenberg-Moerman, 2011; Dhaliwal et al., 2011; Kim et al., 2011).

We examine the role of auditor opinions in debt contracting directly rather than proxies of audit quality in this study. By focusing on the debt contracts of borrowers with both QAOs and clean audit opinions, we are more confident in suggesting causality between a change in accounting quality and a change in debt contract design. Another advantage of focusing our study on qualified opinions is that we are able to examine the effects of financial reporting quality on debt contracting over a much longer time period than previous studies and beyond the context of the Sarbanes-Oxley Act of 2002.<sup>6</sup> Additionally, while several studies have examined the relation between accounting quality and the costs of equity and debt (see e.g., Francis et al., 2004; Bharath et al., 2008), these studies rely on models of accrual quality that are often criticized (Dechow et al., 2010).

We first formally test the effect of a QAO on loan spreads. Consistent with the preceding discussion, we predict that a QAO will affect loan pricing by decreasing the ability

---

<sup>5</sup> Fortin and Pittman (2007) suggest that this benefit may exist only for publicly-traded firms; they find no evidence that private firms' cost of debt is affected by auditor quality. These studies use Big 6 audit firms as a proxy for high quality auditors.

<sup>6</sup> Our sample period begins in 1992 while Costello and Wittenberg-Moerman 2011 use a sample beginning in 2002; Kim et al. 2011 use a sample beginning in 2005; and Dhaliwal et al. 2011 use a sample beginning in 2004.

of lenders to use accounting for contracting purposes and by increasing uncertainty about borrower creditworthiness. If lenders view a QAO as an indication of low financial reporting quality they will be reluctant to use accounting numbers in debt contracts and will therefore increase interest rates to compensate for a contracting mechanism no longer at their disposal (Jensen and Meckling, 1976; Smith and Warner, 1979). Furthermore, if lenders view a QAO as conveying a higher credit risk than an unqualified opinion, then a QAO will lead to a higher interest rate on the loan. Formally, we predict:

**H1: *A qualified audit opinion leads to an increase in loan spreads for borrowers.***

Debt covenants are an important disciplining force in debt contracts. They provide a contractible way for lenders to monitor loans after issuance, and they are included in debt contracts to reduce lender risk by reducing managers' ability to extract rents from debt holders and by giving lenders control of the firm during bad economic states of the firm.<sup>7</sup> Debt holders are affected negatively by borrowers' economic losses, but they receive relatively little benefit from borrowers' economic gains, so lenders prefer to gain control of the borrowing firm as quickly as possible when their investment is at risk (see e.g., Aghion and Bolton, 1992). Debt covenant inclusion is costly to borrowers (Core and Schrand, 1999), but the *ex ante* commitment to turn over firm control to lenders during bad states generates more favorable contract terms for borrowers at the contract date (Bradley and Roberts, 2004).

Lenders face a choice between including financial covenants, based on accounting numbers, and general covenants, not dependent on accounting information. Costello and Wittenberg-Moerman (2011) find that the disclosure of an ICW leads to a decrease in the use

---

<sup>7</sup> Jensen and Meckling (1976) list several actions that debt covenants can help to prevent: unwarranted distributions to shareholders, issuance of higher priority debt claims, and investments in negative net present value projects for purposes of empire building and diversification.

of financial covenants in debt contracts. They posit that lenders view financial statement information to be less valuable in contracting after disclosure of an ICW decreases the perceived reliability of financial statements.<sup>8</sup>

Lenders may also choose to include general covenants that do not rely on accounting information. General covenants often specify events that will require the borrower to pay down the balance of their loan, such as: periods of excess cash flow (as defined in the contract), asset sales, additional debt issuance, equity issuance, and insurance settlements. General covenants often dictate the conditions under which dividends may be paid to shareholders and the allowed amount. Additionally, a general covenant may specify the allowed uses of the borrowed funds. Lenders usually include both general and financial covenants in debt contracts. If lenders view a QAO as decreasing the value of including financial covenants they may compensate by increasing the number of general covenants. Alternatively, if financial and general covenants are independent in purpose, the optimal number (and type) of included general covenants may already be included and no change will be observed. Our second hypothesis relates to the use of both general and financial covenants. Presented in the alternative form, our second hypothesis is:

***H2: A qualified audit opinion is associated with a decrease in the number of financial covenants and/or an increase in the number of general covenants contained in subsequent debt contracts.***

To assess the total effect on contract design of a QAO, it is important to consider the many different contract components that lenders can choose from (Gigler et al., 2009). Up

---

<sup>8</sup> If lenders view a QAO as increasing overall information uncertainty, they may react by increasing the number of financial covenants (Bradley and Roberts, 2004). Kim et al. (2011) present evidence consistent with this prediction and find that firms that disclose an ICW have a higher number of financial covenants. Costello and Wittenberg-Moerman (2011) attribute these results to the research design choice of comparing ICW firms to non-ICW firms. We follow the approach of Costello and Wittenberg-Moerman and conduct our tests using only a sample of QAO firms. We discuss our research design and its implications in the next section.

until this point we have only considered the use of spread and covenants in contract design. In reality, lenders have other options to consider when designing a firm-specific contract. We consider the effects of a QAO on three additional contracting options available to lenders: loan size, the requirement of collateral, and the duration of the loan contract. We view a QAO as a disclosure event that reduces financial statement reliability, and we predict that lenders will be more likely to use these non-accounting contracting mechanisms after a QAO. Stated in the alternative form, we predict that:

***H3: A qualified audit opinion is associated with decreases in the size of loans granted to borrowers, increases in the likelihood that lenders will require collateral from borrowers, and decreases in the average length of maturity in subsequent debt contracts.***

Our last formal hypothesis explores the use of financial accounting ratios in performance pricing provisions. Performance pricing provisions increase interest spreads when credit quality deteriorates and decrease spreads when credit quality improves. Asquith et al. (2005) find that performance pricing provisions are more likely to be included when prepayment is more likely or more costly and when moral hazard costs are higher. The inclusion of a performance pricing provision is associated with lower spreads in debt contracts and the provisions are usually based on financial ratios or credit ratings. Consistent with lenders believing that a QAO indicates lower financial reporting quality, we predict that:

***H4: A qualified audit opinion is associated with a decrease in the likelihood that a performance pricing provision is based on a financial ratio in subsequent debt contracts.***

### 3. Sample and Research Design

#### 3.1 Sample Selection

Our empirical strategy is to investigate whether lenders change the terms of debt contracts after a borrower receives a qualified opinion from its auditor. We focus our analysis on a sample of firms that received a QAO during our sample period. We separate firm observations into three distinct categories: the period during which a firm receives a qualified opinion from its auditor, QAO period; the three years after the QAO period, after-QAO period; and all other firm year observations, non-QAO period.<sup>9</sup> The purpose of separating the QAO and non-QAO periods is obvious. We include the after-QAO period in an attempt to capture the lingering reputation effects that borrowers may experience after a QAO, despite receiving clean audit reports. Consequently, we investigate the effects of a QAO in the QAO and after-QAO periods in an attempt to determine whether reputation effects linger in debt contract design.

We obtain audit opinion data from COMPUSTAT and Audit Analytics and match these data with public firms in the Dealscan database provided by the Loan Pricing Corporation (LPC). The private debt contracts in the Dealscan database represent a large source of corporate funds for these publicly-traded companies. Sufi (2007) reports that approximately 90% of the 500 largest nonfinancial firms in COMPUSTAT obtained a loan through private channels during his sample period of 1994 to 2002 and that the market for these loans reached \$1 trillion during this period. The value of private deals grew to \$1.69 trillion in 2007 (Kim et al., 2011).

---

<sup>9</sup> Note that the “non-QAO” period encompasses time periods potentially both before and after a firm receives a QAO. In untabulated robustness tests we confirm that our results are not dependent on this design choice. Results are robust to redefining the “non-QAO” period to only include observations before the QAO and omitting all other observations. Additionally, the choice of defining the “after-QAO” period as three years is necessarily ad hoc. Results are robust to redefining the “after-QAO” period as the two years and one year after a QAO.

We eliminate firms without a QAO during our sample period of 1992 to 2009. We make this design choice following Costello and Wittenberg-Moerman (2011) and argue that conducting our analyses within a sample of QAO firms is a stronger design choice than including both QAO and non-QAO firms in our tests. We also require all sample firms to have at least one loan during the non-QAO period and one loan in either the QAO or after-QAO period to mitigate the concern that changes in the sample over time drive our results. Table 1 presents our sample selection process. After the requirements mentioned above and after eliminating observations with missing data needed in our analyses, our final sample includes 11,205 loans for 1,663 borrowers.<sup>10</sup>

### *3.2 Descriptive Statistics*

Table 2 Panel A reports descriptive statistics for the sample data, we define our variables in Appendix A. On average our sample firms are large, average assets of \$2,703 million; profitable, average ROA (EBIDTA divided by total assets) of 0.12; and highly levered, average long-term debt to assets of .31. The loans in our sample have a mean spread above LIBOR of 212 basis points. This is slightly higher than the 199.6 average spread of loans included in the Dealscan database, providing some evidence that QAO firms are different than non-QAO firms. The average loan size is \$287M and matures in an average of 47.75 months. Debt contracts include an average of 2.51 financial covenants and 5.35 general covenants. Most loans include a performance pricing provision (64.5%), require collateral (73.5%), and are a revolver (61%). The QAO period accounts for 36.1% of observations, 20.7% of observations fall into the after-QAO category, and the remaining 43.2% of observations are non-QAO observations.

---

<sup>10</sup> Syndicated loans often bundle multiple facilities in to one transaction. These different facilities have different contract terms but are syndicated as a single transaction. Consistent with other work using private debt contracts, we conduct our tests at the individual facility level.

Table 2 Panel B provides a correlation matrix. Many of the contracting terms are significantly correlated. Spread is positively associated with the number of financial and general covenants in the univariate, and it is negatively correlated with including a performance pricing provision, requiring collateral, and the number of lenders included in the syndicate. This is consistent with lenders having many different mechanisms through which to design contracts (Melnik and Plaut, 1986), not just through spread. We expect lenders to change the way they use accounting information in contract designs when a change in perceived financial statement reliability occurs.

### *3.3 Research Design*

We predict that lenders will view a QAO as a decrease in the contracting reliability of financial statement information. To examine the effect of a QAO on contract design, we estimate the following model:

$$\text{Contractual Term} = \alpha + \beta_1 \text{QAO} + \beta_2 \text{After\_QAO} + \sum \beta_i (\text{Control}_i) \quad (1)$$

where *QAO* is an indicator variable equal to one if a loan is issued during the QAO period and zero otherwise. *After\_QAO* is an indicator variable equal to one if a loan is issued in the three year period after the first clean audit report following a QAO. *Contractual Term* is a variable representing the specific contracting mechanism that we investigate in each of our tests, and it includes interest spread, the number of financial covenants, the number of general covenants, whether or not a loan is secured, the maturity length of a loan, and whether or not a loan includes a performance pricing provision based on a financial ratio.

We include a variety of control variables found to be important determinants of debt contracting terms employed in the previous literature. Firm size, profitability, and capital structure are associated with information asymmetries and the cost of debt (Bharath et al.,

2007); longer maturity loans are associated with the probability of default (Demiroglu and James, 2010); and the likelihood of inclusion of a performance pricing provision increases when adverse selection and moral hazard costs are higher (Asquith et al., 2005). We also control for whether the facility is an institutional loan, a revolver, requires collateral, the size of the loan and the number of syndicate members (Beatty et al., 2002; Sufi, 2007; Costello and Wittenberg-Moerman, 2011).

We also examine whether a long-term relationship between a borrower and a lender can mitigate the effects of a QAO (Diamond, 1984; Sufi, 2007; Bharath et al., 2011; Costello and Wittenberg-Moerman, 2011). We include indicator variables for whether any syndicate member has participated in a loan with the borrower in the previous five years (*Previous\_Lender*) and whether the lead arranger was the lead arranger on a loan within the previous five years (*Previous\_Lead\_Arranger*). We include these indicator variables and interact them with our variables of interest, *QAO* and *After\_QAO*.

## **4. Empirical Results**

### *4.1 Financial Reporting Quality and the Cost of Debt*

Table 3 presents results from the interest spread OLS regression. We regress loan spread on *QAO*, *After\_QAO*, and a variety of control variables. Our first hypothesis predicts that if lenders view a QAO as a signal of lower financial reporting quality then debt issued during the QAO period will have a higher interest rate. Additionally, if there is a long term reputation effect, then debt issued during the after-QAO period will have a higher spread as well. Table 3 presents results consistent with these predictions. In Column 1, the coefficient on *QAO* is positive and statistically significant; loans issued during the QAO period have a spread over LIBOR that is 17.90 basis points higher than loans issued during the non-QAO

period. This represents an increase in the cost of debt of 8.4%. Furthermore, the coefficient on *After\_QAO* is positive and statistically significant, and it indicates that loan issued during the after-QAO period have an average spread 8.59 basis points higher than loans issued during a non-QAO period. The fact that loans have a higher spread in the after-QAO period indicates that lenders view borrowers cautiously for up to three years after an auditor issues a clean opinion.

Many of the included control variables are statistically significant. Spreads are negatively associated with borrower profitability, firm size, loan size, the inclusion of a performance pricing provision, the number of lenders, and whether or not the loan is a revolver. Spreads are positively associated with leverage, whether or not the loan is secured, and whether or not the loan is institutional. The variables of interest and the control variables capture much of the variation in the dependent variable; the R-squared is over 48%.

Columns 2 and 3 present results from our specifications that attempt to capture the effect of a long-term relationship between a borrower and lender. While *QAO* and *After\_QAO* are still positive and statistically significant, the interaction terms between *QAO* and *After\_QAO* with *Previous\_Lender* are negative and significant with coefficients of -15.96 and -12.41, respectively. This interaction effect is even stronger when the lead arranger (*Previous\_Lead\_Arranger*) of the syndicate was the lead arranger of a loan issued within the previous five years, with coefficients of -20.61 and -17.11, respectively. These results indicate that lenders that have prior lending experience with borrowers face less uncertainty after a QAO and do not increase spreads to compensate as much as lenders without a relationship with a borrower.

#### 4.2 Financial Reporting Quality and the Use of Debt Covenants

Table 4 presents results related to the inclusion of financial covenants in loan contracts. Hypothesis 2 predicts that lenders will be less willing to rely on financial covenants in debt contracts after the reliability of the financial statements is brought in to question by a qualified opinion from an auditor. The first column in Table 4 provides evidence that the number of financial covenants included in a debt contract is lower in the QAO and after-QAO periods than the non-QAO period. The coefficients on *QAO* and *After\_QAO* are -.11 and -.11 and are statistically significant. These decreases represent a decrease in the use of financial covenants by 4.4%. H2 also predicts that lenders will be more likely to include general covenants. Column 4 provides evidence consistent with this hypothesis. The coefficient on *QAO* is .14 and statistically significant. This finding provides some evidence consistent with our prediction that when lenders are less willing to use accounting in debt contracts, they will increase the non-accounting contracting mechanisms that they have at their disposal. Interestingly, the coefficient on *After\_QAO* is positive .05 but insignificant. The long-term effects of a QAO do not seem to affect general covenants as much as they do financial covenants.

Columns 2, 3, 5, and 6 investigate the effects of long-term lender relationships on the use of debt covenants after a QAO. There does not seem to be a strong effect on the use of financial covenants when a lender has had a previous relationship with a borrower. Overall, these results suggest that while a prior lending relationship with the borrower can reduce the uncertainty costs associated with a QAO, it does not greatly increase the willingness of lenders to use financial covenants for contracting purposes. On the other hand, for the general covenant results (Column 6), the prior lending relationship with the borrower by the lead

arranger leads to significant decreases in the number of general covenants included in debt contracts.

#### *4.3 Financial Reporting Quality and the Use of Additional Loan Components*

Table 5 presents results of Hypothesis 3. H3 predicts that lenders will include more stringent non-accounting loan terms after a QAO to compensate for both an increase in uncertainty about the borrower's credit risk as well as the reduced efficiency of using financial statement information for contracting purposes. We investigate three non-accounting mechanisms that lenders can employ in debt contracts: loan size, requirement of collateral, and loan maturity. The results are reported in Table 5. In Column (1) of Table 5, we provide strong evidence that lenders decrease the loan amounts offered to borrowers after a QAO. The coefficients on *QAO* and *After\_QAO* in Column 1 are -.06 and -.03 respectively and statistically significant in each specification of the model. This finding is consistent with the credit rationing literature (see e.g., Jaffee and Russell, 1976; Stiglitz and Weiss, 1981) and provides evidence consistent with lenders reacting to an increase in uncertainty and a decrease of perceived financial statement quality by decreasing the amount of capital provided to borrowers. Economic theory on credit rationing (Stiglitz and Weiss, 1981) would suggest that some firms will not obtain loans when a QAO increases information asymmetry and uncertainty. Our empirical results are based on firms that have obtained a loan in the event of a QAO. As a result, our estimate of the effect of QAO on debt terms underestimates the true cost of a QAO because borrowers are likely to pay higher costs of financing if they are denied a loan from lenders in the private debt market because of the QAO. We also find that the likelihood of requiring collateral in a loan contract increases significantly after a qualified opinion in both the QAO and after-QAO periods. Table 5 Column 4 indicates that the probability of requiring collateral increases during the QAO and after-QAO periods. The

probability of requiring collateral increases by 7% and 3% during these respective periods and is statistically significant.

Our last test of H3 investigates loan maturity choices that lenders make at the contract inception date. If lenders believe that a QAO increases uncertainty they may shorten the length of loans issued after an auditor offers an opinion that is not unqualified. In each of the model specifications, Columns (7), (8) and (9), we find no evidence that this is the case. The coefficients of *QAO* and *After\_QAO* in Table 5 Column 7 are indistinguishable from zero. Loan maturity length does not seem to be the tool that lenders use to deal with a decrease in a borrower's financial statement reliability.

#### *4.4 Financial Reporting Quality and the Structure of Performance Pricing Provisions*

Table 6 presents the results of our last formal hypothesis. Hypothesis 4 predicts that lenders will be less willing to include performance pricing provisions that are based on a financial ratio after a QAO. Performance pricing provisions can be based on financial ratios that use accounting numbers or on credit ratings provided by independent rating agencies. Credit rating agencies act as an additional source of information that is available to lenders and other market participants. We predict that a decrease in financial statement reliability will lead lenders to increase their use of credit ratings in performance pricing provisions. Table 6 presents results consistent with this prediction.

In Table 6 Column 1 *QAO* has a coefficient of -.16 which is statistically significant and indicates that lenders are more likely to base a performance pricing provision on a credit rating in the QAO period. We find no evidence that the likelihood of basing a performance pricing provision on a credit rating increases during the after QAO period. Columns 2 and 3 present the performance pricing provision results after controlling for the relationship between a lender and a borrower. The coefficients on *QAO\*Previous\_Lender* and

$QAO*Previous\_Lead\_Arranger$  are -0.18 and -0.26 respectively and both are statistically significant. This finding suggests that the decreases in performance pricing provisions based on financial ratios are greater if the lender has a prior lending relationship or if the lender has been a lead arranger of a loan in the last five years. As in the previous specification, there does not seem to be any effect during the after-QAO period. This provides some evidence that changes to performance pricing provisions do not last as long after a QAO as they do for many of the other contractual mechanisms we have investigated.

## **5. Additional Analyses**

### *5.1 The Incremental Effect of Auditor Opinion on Loan Terms after Controlling for Accounting Quality*

Our study investigates the role that auditors play in providing information to the private debt market about the usefulness of accounting information for debt contracting purposes. We provide compelling evidence that after a qualified opinion from an auditor lenders decrease their reliance on accounting numbers and increase their use of non-accounting contracting mechanisms. However, up until this point in our paper our tests have largely ignored another crucial output of the audit process, the financial statements themselves. While many elements from the financial statement have been included as control variables in our tests, it may be that lenders are able to infer low financial statement reliability when they observe certain accounting characteristics reported in the same period as the qualified opinion. If this is the case, then the audit opinion is not incrementally informing lenders; the financial statements themselves inform lenders that accounting numbers will be less useful for contracting purposes and lenders adjust loan terms accordingly.

Prior research in the earnings management literature has documented an association between various characteristics of accruals and earnings quality (Healy, 1985; Jones, 1991).<sup>11</sup> Bartov et al. (2001) provide evidence that accruals information can be used to predict qualified opinions from auditors. We attempt to determine if the earnings quality from a qualified audit period informs lenders about the financial statement reliability of a firm with a QAO. We focus on two measures of accruals quality employed in the literature: abnormal accruals (*Abnormal\_Accruals*) as defined in Ashbaugh-Skaife et al. (2008) without controlling for the effects of conditional conservatism on accruals quality (Dechow et al., 1995; Kothari et al., 2005) and accruals noise (*Accruals\_Noise*) as defined in Dechow and Dichev (2002) and Kothari et al. (2005). We add these measures to our original specifications for interest spread and the number of debt covenants and present the results in Table 7.

Our measures of accruals quality are decreasing in quality; higher values imply lower accruals quality. In untabulated univariate correlations, both measures of accounting quality are positively correlated with *QAO*. Panel A presents the interest spread results from H1 with the addition of the accruals quality variables. The coefficients on *Abnormal\_Accruals* and *Accruals\_Noise* are positive, large in magnitude, and statistically significant. Importantly, the coefficient on *QAO* remains positive and statistically significant across all specifications. Panel B presents results for the use of financial covenants in debt contracts after controlling for accruals quality. The coefficients on *Abnormal\_Accruals* and *Accruals\_Noise* are both positive and significant in these specifications. The coefficient on *QAO* remains negative and significant for both the *Abnormal\_Accruals* and *Accruals\_Noise* specifications. Overall, Table 7 provides evidence that lenders are not changing their use of accounting numbers in

---

<sup>11</sup> See Dechow et al. (2010) for a review of the earnings quality literature.

debt contracts based solely on the information contained in the financial statements. Lenders appear to be less willing to use accounting information in debt contracts after an auditor gives a QAO, even after controlling for the information in the financial statements.

### *5.2 Financial Reporting Quality and Internal Control Weaknesses*

Our study has been partly motivated by recent work investigating the effect that an ICW, as a proxy for low financial reporting reliability, can have on the use of accounting in debt contracting (Costello and Wittenberg-Moerman, 2011; Dhaliwal et al., 2011; Kim et al., 2011). Our primary analysis similarly documents that a QAO decreases the use of accounting and changes the use of non-accounting information in subsequently issued debt contracts. A disclosed ICW is more likely to result in a QAO, but not all QAOs are caused by an ICW. In our sample, 10.4% of our QAO observations disclose an ICW. In Table 8 we include the disclosure of a material weakness in internal controls in our interest spread and financial covenant specifications to determine whether or not the QAO effect we document is incremental to the ICW effect previously presented in the literature.

Firms were not required to report an ICW until 2004. To accurately assess the incremental effect of an ICW on our sample, we limit our sample to firms that disclose an ICW or a QAO during the period 2004 to 2009. In the univariate (unreported) *QAO* and *ICW* are positively correlated, but the correlation is only .032. Panel A presents our interest spread specification and includes an indicator variable for whether or not an ICW was disclosed. Consistent with the previous literature, the coefficient on ICW is positive and significant across all specifications. However, our variable of interest, QAO, remains positive and significant. Panel B investigates the effect of a QAO on the use of financial covenants in debt contracts incremental to an ICW. The coefficient on ICW is not statistically significant, but *QAO* remains negative and significant across all specifications. Overall, Table 8

provides evidence that a QAO informs lenders about the usefulness of accounting in debt contracting incremental to a disclosure of a weakness in internal controls.

Until now we have considered the effects on debt contracting of qualified opinions and disclosed weaknesses in internal controls. Additionally, auditors may disclose their doubt that a firm will remain a going concern. The issuance of a going concern opinion is rare, serious, and associated with an increased likelihood of future financial failure (Campbell and Mutchler, 1988; Chen and Church, 1996). Costello and Wittenberg-Moerman (2011) and Kim et al. (2011) investigate the impact of the seriousness of an ICW on the loan term effect that document. In general, they document larger effects of an ICW in loan contracting for more serious ICWs.<sup>12</sup> In our sample of QAO observations, 125 also disclosed a going concern opinion. In untabulated results we interact a going concern indicator variable with QAO in our main specifications. The coefficient on this interaction is statistically significant in the predicted direction for both the interest spread and financial covenant specifications and indicates that a going concern opinion exacerbates the QAO effect previously documented.

### *5.3 The Effect of Financial Reporting Quality on the use of Performance Covenants*

We also investigate whether lenders perceive accounting reliability to vary across different financial covenant types. Christensen and Nikolaev (2012) explore the monitoring roles of two different types of financial covenants: capital covenants and performance covenants. Building on contract theory (Aghion and Bolton, 1992), they argue that capital covenants reduce agency problems by aligning lender and shareholder interests and that performance covenants serve as tripwires that transfer control rights when their investment is at risk. Capital covenants are balance-sheet-based and require borrowers to keep sufficient

---

<sup>12</sup> Following Doyle et al. (2007), these studies define an ICW as “serious” if it is a company-level material weakness, as opposed to an account-level material weakness.

capital inside the firm; performance covenants are income-statement-based and employ accounting numbers as timely measures of borrowers' economic performance.

Prior research has shown that when financial reporting quality is in question, income statement items, specifically earnings, are most likely to be the primary focus of manager manipulation (Barton and Simko, 2002).<sup>13</sup> We predict that the perceived contracting efficiency of capital and performance covenants will change when a QAO reduces financial statement reliability. In previous tests we have documented that the use of financial covenants decreases after a QAO; we predict that this effect will be exacerbated for performance covenants, those covenants that may be most susceptible to targeted manipulation. In untabulated tests we find evidence that the likelihood of including both performance and capital covenants decreases following a QAO; we find no evidence of substitution from performance to capital covenants after a QAO. This finding is consistent with lenders not appearing to benefit from shifting between performance and capital covenants in our sample of firms with a QAO.

#### *5.4 The Effect of Financial Reporting Quality on the Holdings of the Lead Arranger*

Ball et al. (2008) provide evidence that accounting information can play a significant role in affecting the relationship between lead arrangers and other syndicate loan members. Lead arrangers earn substantial fees for performing due diligence before and for monitoring a loan after it is issued. This arrangement creates an information asymmetry between lead arrangers and other syndicate members who do not have the same access to private information. As information asymmetry increases, so does the demand of syndicate members for lead arrangers to hold a higher proportion of the debt. Ball et al. (2008) predict and find

---

<sup>13</sup> While the balance sheet reflects the effect of income statement item manipulation through net assets, we view managers manipulating earnings as attempting to primarily change the accounting outcome of income statement items, not the balance sheet items that are also affected.

that when the debt-contracting value of accounting is low that information asymmetry will be higher and lead arrangers will hold a higher proportion of the loan. We investigate whether a QAO leads to an increase in information asymmetry between lead arrangers and other syndicate members and therefore an increase in the proportion of the loan held by the lead arranger. In untabulated results we do not find any evidence that a QAO changes the proportion of a loan held by the lead arranger, regardless of that lead arranger's previous relationship with the borrower.

#### *5.5 The Differential Reporting of Qualified Opinions by Large and Small Audit Firms*

Prior studies find that large auditors have greater reputation assets than small auditors, and therefore have higher incentives to provide a high audit quality. Large auditors have been used as a proxy for audit quality (Pittman and Fortin, 2004). We investigate whether a QAO from a large audit firm causes a greater impact on the contractual terms of the subsequent debt contracts than a QAO from a small audit firm. Our results (untabulated) suggest no significant difference on any of the debt contract terms we have examined. Therefore, conditional on a QAO being issued, we do not find any significant difference in the effects on contracts terms between large and small auditors. This does not necessarily contradict the conclusions drawn in prior studies that big audit firms have higher audit quality because the propensity to issue a QAO may be different across large and small auditors or there may be endogeneity in the match between auditor size and client quality.

For our sample of 11,205 observations, 93.8% of the total observations are audited by the big auditors. The propensity to issue a QAO for the big auditors is 36.5%, and is 30.1% for small auditors. This result, while providing neither necessary nor sufficient evidence, is consistent with big auditors yielding less to client pressure and providing higher audit quality. Furthermore, Pittman and Fortin (2004) focus on a sample of recent IPO firms for which the

signaling value of hiring a big auditor is likely to be higher than for our sample of firms that are relatively large and mature.

## **6. Summary and Conclusions**

In this paper we empirically investigate the effect of qualified audit opinions on private debt contracts using a comprehensive sample of QAOs from 1992 to 2009. Consistent with the monitoring role of audit opinions on accounting quality, we find that a qualified audit opinion is associated with an average increase of 18 basis points (8.4% of loan spread) in the interest rate of loan facilities issued within the next year. We find that this effect persists for at least three years following a restored clean opinion. Furthermore, we find evidence that lenders replace financial covenants with non-financial covenants following a qualified audit opinion of the borrower's financial statements.

We also find a qualified audit opinion is associated with a decrease in loan size and an increase in the likelihood of requirement of collateral from a borrower, but we find no evidence that a qualified audit opinion is associated with a change in the length of loan maturity. Finally, we find that a qualified audit opinion is associated with a decreased use of performance pricing provisions in debt contracts that are based on financial ratios. A variety of additional tests demonstrate that the effects of a qualified audit opinion on contractual terms are robust to controlling for other indicators of accounting quality such as abnormal accruals, accruals noise, and disclosure of an internal control weakness.

In contrast to the mixed evidence of stock market reactions to audit opinions, we find a strong and economically significant response of debt contracting terms to qualified audit opinions. These results are not obvious given that private lenders have access to private information unavailable to most market participants, and they suggest that auditors play a

unique role in debt contracting through monitoring borrowers' accounting quality. Our research contributes to our understanding of the economic value of auditing in an important market that has, up until now, received little attention. The strong results from our investigation point to additional research in this area. As an example, future research can extend the investigation into whether and how a QAO affects a borrower's ability to access the public versus private debt markets. Additionally, it would be interesting to examine whether the role of auditor opinions in debt contracting varies across countries where institutional infrastructures are divergent.

## Appendix A: Variable Definitions

---

### Auditor Opinion Variables

---

<i>QAO</i>	An indicator variable equal to 1 if the firm received an opinion from the auditor other than unqualified in the current year, and 0 otherwise.
<i>After_QAO</i>	An indicator variable equal to 1 if the firm had a QAO equal to 1 in the previous three years, and 0 otherwise.
<i>Going concern</i>	An indicator variable equal to 1 if the firm received a going concern opinion from its auditor in the current year, and 0 otherwise.
<i>ICW</i>	An indicator variable equal to 1 if the firm's auditor concludes internal controls over financial reporting are not effective under SOX 404 in the current year, and 0 otherwise.

### Borrower-Specific Variables

---

<i>Leverage</i>	Long-term debt divided by total assets, estimated in the year prior to entering into a loan contract.
<i>Profitability</i>	EBIDTA divided by total assets, estimated in the year prior to entering into a loan contract.
<i>Size</i>	The natural log of total assets, estimated in the year prior to entering into a loan contract.

### Loan-Specific Variables

---

<i>Previous_Lender</i>	An indicator variable equal to 1 if at least one of the loan's lenders had been a lender of the borrower's in the preceding five years, and 0 otherwise.
<i>Previous_Lead_Arranger</i>	An indicator variable equal to 1 if at least one of the loan's lead arrangers had been a lead arranger of the borrower's in the preceding five years, and 0 otherwise.
<i>Financial Covenants</i>	The number of financial covenants included in the loan agreement.
<i>General Covenants</i>	The number of general covenants included in the loan agreement.
<i>Institutional Investor</i>	An indicator variable equal to 1 if the loan's type is term loan B, C, or D (institutional term loans), and 0 otherwise.
<i>Interest Rate</i>	The interest rate is based on the All-in-Drawn-Spread measure reported by DealScan, and it is equal to the number of basis points over LIBOR.
<i>Loan Size</i>	Amount borrowed in millions of dollars.
<i>Maturity</i>	The number of months between the facility's issue date and the date when the loan matures.
<i>Number of Lenders</i>	Number of participants in the loan syndicate.
<i>PP Ratio</i>	An indicator variable equal to 1 if the loan contract has a performance pricing provision based on an accounting ratio; it is 0 to zero if it has a performance pricing provision based on a
<i>PP Indicator</i>	An indicator variable that equals 1 if the loan contract includes performance pricing provisions, and 0 otherwise.
<i>Revolver</i>	An indicator variable equal to 1 if the loan's type is revolver, and 0 otherwise.
<i>Secured</i>	An indicator variable equal to 1 if the loan is backed by collateral, and 0 otherwise.

**Table 1: Sample Selection**

<b>Filters</b>	<b>Facilities</b>	<b>Firms</b>
All DealScan loans	105,273	14,830
Exclude private firms	73,640	10,362
Exclude facilities with missing data <sup>1</sup>	22,976	5,656
Matched before and after sample <sup>2</sup>	11,237	1,663
Restrict sample to loans issued from 1992 to 2009 <sup>3</sup>	11,205	1,663

Table 1 presents our sample selection process.

1. We require firms to have non-missing DealScan and Compustat data for each of our loan- and firm-level control variables.

2. We require that a firm has at least one facility in the non-QAO period and at least one facility in the QAO or After-QAO period.

3. The sample period begins in 1988 with the changes made to the issuing of audit opinions, but we drop the observations before 1992 due to a very limited sample size in those years.

**Table 2: Descriptive Statistics****Panel A: Loan Characteristics**

<i>Loan Characteristic</i>	<i>Number of Observations</i>	<i>Mean</i>	<i>Std Dev</i>	<i>25th Pctl</i>	<i>Median</i>	<i>75th Pctl</i>
<i>N = 11,205</i>						
<i>Previous_Lender</i>		0.67	0.47	0.00	1.00	1.00
<i>Previous_Lead_Arranger</i>		0.44	0.50	0.00	0.00	1.00
<i>Number of Financial Covenants</i>		2.51	1.48	2.00	3.00	4.00
<i>Number of General Covenants</i>		5.35	2.88	3.00	5.00	8.00
<i>Institutional Investor</i>		0.11	0.31	0.00	0.00	0.00
<i>Interest Spread (in bps)</i>		212.02	139.90	112.50	200.00	275.00
<i>Loan Size (in millions)</i>		286.58	753.56	40.00	118.75	300.00
<i>Maturity (in months)</i>		47.75	24.06	33.00	50.00	60.00
<i>Number of Lenders</i>		8.84	9.58	2.00	6.00	12.00
<i>PP Indicator</i>		0.65	0.48	0.00	1.00	1.00
<i>PP Ratio</i>		0.67	0.47	0.00	1.00	1.00
<i>Revolver</i>		0.61	0.49	0.00	1.00	1.00
<i>Secured</i>		0.74	0.44	0.00	1.00	1.00

**Panel B: Sample Characteristics**

<i>Variable</i>	<i>Number of Observations</i>	<i>Mean</i>	<i>Std Dev</i>	<i>25th Pctl</i>	<i>Median</i>	<i>75th Pctl</i>
<i>N = 11,205</i>						
<i>Firm Size</i>		6.45	1.70	5.27	6.43	7.57
<i>Profitability</i>		0.13	0.09	0.08	0.12	0.17
<i>Leverage</i>		0.31	0.25	0.11	0.27	0.44
<i>After_QAO</i>		0.21	0.41	0.00	0.00	0.00
<i>QAO</i>		0.36	0.48	0.00	0.00	1.00

This table presents the descriptive statistics for the total sample. See the appendix for the variable definitions.

We have three periods: QAO, After-QAO, and Non-QAO.

1. *QAO* is equal to 1 when the firm receives a qualified opinion, and 0 otherwise.
2. *After\_QAO* is equal to one three years after a QAO, and 0 otherwise.
3. Non-QAO periods occur when both *QAO* and *After\_QAO* are equal to 0.

**Panel C: Correlation Matrix**

	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>
<i>1 Interest Rate</i>													
<i>2 Number of Financial Covenants</i>	0.16												
<i>3 Number of General Covenants</i>	0.25	0.39											
<i>4 Number Lenders</i>	-0.24	-0.05	0.11										
<i>5 Loan Size (in millions)</i>	-0.17	-0.14	0.00	0.30									
<i>6 Maturity (in months)</i>	-0.01	0.12	0.34	0.17	0.02								
<i>7 PP Indicator</i>	-0.36	0.16	0.17	0.18	0.08	0.11							
<i>8 Secured</i>	0.50	0.23	0.35	-0.20	-0.20	0.17	-0.19						
<i>9 Previous_Lender</i>	-0.18	0.00	0.14	0.32	0.15	0.10	0.16	-0.13					
<i>10 Previous_Lead_Arranger</i>	-0.12	-0.02	0.06	0.21	0.07	0.06	0.08	-0.08	0.62				
<i>11 Institutional Investor</i>	0.25	0.15	0.33	0.06	0.04	0.34	-0.20	0.20	0.06	0.05			
<i>12 Revolver</i>	-0.21	-0.04	-0.19	-0.07	-0.05	-0.06	0.19	-0.05	-0.03	-0.02	-0.44		
<i>13 QAO</i>	0.06	-0.10	0.07	0.04	0.08	0.03	-0.03	-0.01	0.11	0.08	0.04	0.00	
<i>14 After_QAO</i>	-0.06	-0.03	0.00	0.03	0.00	0.05	0.02	-0.01	0.02	0.02	0.00	0.02	-0.39

Table 2 Panel C presents the Pearson correlation matrix of selected variables. All variables are defined in the appendix.

**Table 3: Interest Rate as a Function of Financial Reporting Reliability**

Variables	(1) Interest Rate	(2) Interest Rate	(3) Interest Rate
<i>QAO</i>	17.90*** (3.869)	25.12*** (4.657)	27.00*** (4.838)
<i>After_QAO</i>	8.59** (3.439)	13.65*** (4.245)	15.51*** (4.515)
<i>Previous_Lender</i>		-2.52 (3.184)	
<i>QAO*Previous_Lender</i>		-15.96*** (4.567)	
<i>After_QAO*Previous_Lender</i>		-12.40** (4.930)	
<i>Previous_Lead_Arranger</i>			3.68 (3.293)
<i>QAO*Previous_Lead_Arranger</i>			-20.61*** (5.350)
<i>After_QAO*Previous_Lead_Arranger</i>			-17.11*** (5.786)
<i>InstitutionalInvestor</i>	47.63*** (5.819)	48.18*** (5.809)	48.08*** (5.818)
<i>Revolver</i>	-28.08*** (2.811)	-27.90*** (2.813)	-27.85*** (2.810)
<i>Financial Covenants</i>	1.65 (1.228)	1.87 (1.226)	1.76 (1.223)
<i>Loan Size</i>	-11.22*** (1.470)	-10.98*** (1.459)	-11.15*** (1.466)
<i>maturity</i>	-0.07 (0.073)	-0.08 (0.073)	-0.08 (0.073)
<i>Number Lenders</i>	-0.37** (0.171)	-0.30* (0.171)	-0.31* (0.171)
<i>PP Indicator</i>	-52.95*** (3.725)	-52.55*** (3.702)	-52.71*** (3.717)
<i>Secured</i>	93.13*** (3.155)	92.95*** (3.142)	92.90*** (3.141)
<i>Firm Size</i>	-11.11*** (1.490)	-10.70*** (1.498)	-10.85*** (1.492)
<i>Leverage</i>	71.28*** (6.650)	72.05*** (6.621)	71.60*** (6.606)
<i>Profitability</i>	-216.22*** (17.586)	-214.78*** (17.633)	-215.20*** (17.543)
<i>Constant</i>	431.58*** (24.707)	425.82*** (24.660)	426.49*** (24.746)
<i>Year dummy</i>	Yes	Yes	Yes
<i>Observations</i>	11,205	11,205	11,205
<i>Adj. R-squared</i>	0.48	0.49	0.49

Table 3 presents the results from the estimation of the following interest rate model:

$$\text{Interest Rate} = \alpha + \beta_1 QAO + \beta_2 \text{After\_QAO} + \beta_i \text{CONTROLS} + \varepsilon$$

We regress the interest rate on *QAO*, *After\_QAO*, loan- and firm-specific control variables in Column 1. We include *Previous\_Lender* to indicate whether a borrower has obtained a loan from at least one syndicate member in the previous five years and interact it with *QAO* and *After\_QAO* in Column 2. In Column 3 we include *Previous\_Lead\_Arranger* to indicate whether a borrower's lead arranger was the lead arranger of a loan obtained by the borrower in the previous five years and interact it with *QAO* and *After\_QAO*. All variables are defined in the appendix.

Firm-specific financial variables are winsorized at the 0.01 level. Regressions include year fixed effects and standard errors are heteroskedasticity robust, clustered at the firm level. *P*-values are reported in parentheses. \*\*\*, \*\*, \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Table 4: Financial Covenants as a Function of Financial Reporting Reliability**

Variables	(1) Financial Covenants	(2) Financial Covenants	(3) Financial Covenants	(4) General Covenants	(5) General Covenants	(6) General Covenants
<i>QAO</i>	-0.11** (0.048)	-0.14** (0.053)	-0.10* (0.056)	0.14* (0.084)	0.19* (0.100)	0.24** (0.107)
<i>After_QAO</i>	-0.11** (0.050)	-0.08 (0.058)	-0.05 (0.060)	0.05 (0.084)	0.23** (0.098)	0.28*** (0.104)
<i>Previous_Lender</i>		0.25*** (0.044)			0.46*** (0.077)	
<i>QAO*Previous_Lender</i>		0.04 (0.053)			-0.16 (0.106)	
<i>After_QAO*Previous_Lender</i>		-0.08 (0.069)			-0.45*** (0.128)	
<i>Previous_Lead_Arranger</i>			0.19*** (0.053)			0.32*** (0.089)
<i>QAO*Previous_Lead_Arranger</i>			-0.04 (0.071)			-0.27** (0.134)
<i>After_QAO*Previous_Lead_Arranger</i>			-0.15* (0.083)			-0.54*** (0.147)
<i>InstitutionalInvestor</i>	0.45*** (0.051)	0.44*** (0.051)	0.44*** (0.051)	0.92*** (0.098)	0.91*** (0.098)	0.91*** (0.098)
<i>Revolver</i>	0.01 (0.028)	0.01 (0.028)	0.01 (0.028)	-0.59*** (0.050)	-0.58*** (0.049)	-0.59*** (0.050)
<i>Interest rate</i>	0.24 (0.181)	0.27 (0.180)	0.26 (0.180)	3.90*** (0.317)	3.90*** (0.317)	3.87*** (0.318)
<i>Secured</i>	0.44*** (0.047)	0.43*** (0.047)	0.44*** (0.047)	2.00*** (0.080)	1.99*** (0.079)	2.00*** (0.080)
<i>Loan Size</i>	-0.02 (0.020)	-0.03* (0.020)	-0.03 (0.020)	0.41*** (0.035)	0.38*** (0.035)	0.40*** (0.036)
<i>Maturity</i>	0.01*** (0.001)	0.01*** (0.001)	0.01*** (0.001)	0.02*** (0.002)	0.02*** (0.002)	0.02*** (0.002)
<i>Number of Lenders</i>	0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)	0.00 (0.004)	0.00 (0.004)	0.00 (0.004)
<i>PP Indicator</i>	0.46*** (0.043)	0.45*** (0.043)	0.46*** (0.043)	1.19*** (0.079)	1.17*** (0.079)	1.19*** (0.079)
<i>Firm Size</i>	-0.19*** (0.021)	-0.20*** (0.021)	-0.19*** (0.021)	-0.01 (0.036)	-0.03 (0.036)	-0.01 (0.036)
<i>Leverage</i>	0.32*** (0.088)	0.29*** (0.087)	0.30*** (0.087)	0.98*** (0.165)	0.94*** (0.163)	0.96*** (0.165)
<i>Profitability</i>	1.16*** (0.225)	1.11*** (0.224)	1.16*** (0.224)	2.37*** (0.387)	2.28*** (0.387)	2.37*** (0.388)
<i>Constant</i>	0.480 -0.307	0.61** -0.308	0.470 -0.308	-9.34*** -0.577	-9.16*** -0.58	-9.40*** -0.577
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Observations	11,205	11,205	11,205	11,205	11,205	11,205
Adj. R-squared	0.32	0.32	0.32	0.44	0.45	0.44

Table 4 presents the results from the estimation of the following covenant model:

$$\text{Covenant Type (Financial or General)} = \alpha + \beta_1 \text{QAO} + \beta_2 \text{After\_QAO} + \beta_i \text{CONTROLS} + \varepsilon$$

We regress the number of financial covenants (Column 1) and general covenants (Column 4) on *QAO*, *After\_QAO*, loan- and firm-specific control variables. We include *Previous\_Lender* to indicate whether a borrower has obtained a loan from at least one syndicate member in the previous five years and interact it with *QAO* and *After\_QAO* in Columns 2 and 4. In Columns 3 and 6 we include *Previous\_Lead\_Arranger* to indicate whether a borrower's lead arranger was the lead arranger of a loan obtained by the borrower in the previous five years and interact it with *QAO* and *After\_QAO*. All variables are defined in the appendix.

Firm-specific financial variables are winsorized at the 0.01 level. Regressions include year fixed effects and standard errors are heteroskedasticity robust, clustered at the firm level. *P*-values are reported in parentheses. \*\*\*, \*\*, \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Table 5: Financial Reporting Reliability and Other Loan Characteristics**

Variables	(1) Loan Size	(2) Loan Size	(3) Loan Size	(4) Secured	(5) Secured	(6) Secured	(7) Log_Maturity	(8) Log_Maturity	(9) Log_Maturity
<i>QAO</i>	-0.06*** (0.008)	-0.06*** (0.010)	-0.06*** (0.010)	0.20*** (0.057)	0.26*** (0.067)	0.27*** (0.073)	0.01 (0.019)	0.02 (0.022)	0.01 (0.023)
<i>After_QAO</i>	-0.03*** (0.010)	-0.03*** (0.011)	-0.03*** (0.012)	0.12** (0.058)	0.09 (0.069)	0.10 (0.074)	0.00 (0.020)	0.00 (0.024)	-0.01 (0.025)
<i>Previous_Lender</i>		-0.02*** (0.008)			0.03 (0.054)			-0.05*** (0.018)	
<i>QAO*Previous_Lender</i>		0.00 (0.008)			-0.12* (0.068)			-0.03 (0.022)	
<i>After_QAO*Previous_Lender</i>		-0.01 (0.013)			0.05 (0.082)			0.01 (0.029)	
<i>Previous_Lead_Arranger</i>			-0.02** (0.009)			0.01 (0.066)			-0.06*** (0.021)
<i>QAO*Previous_Lead_Arranger</i>			0.01 (0.012)			-0.13 (0.092)			0.01 (0.029)
<i>After_QAO*Previous_Lead_Arranger</i>			0 (0.016)			0.05 (0.103)			0.04 (0.035)
<i>InstitutionalInvestor</i>	0.05*** (0.011)	0.05*** (0.011)	0.05*** (0.011)	1.39*** (0.134)	1.39*** (0.134)	1.39*** (0.133)	0.61*** (0.026)	0.61*** (0.026)	0.61*** (0.026)
<i>Revolver</i>	0.09*** (0.006)	0.09*** (0.006)	0.09*** (0.006)	-0.01 (0.036)	-0.01 (0.036)	-0.01 (0.036)	0.21*** (0.023)	0.21*** (0.023)	0.21*** (0.023)
<i>Loan Size</i>				-0.15*** (0.027)	-0.15*** (0.027)	-0.15*** (0.027)	0.08*** (0.009)	0.08*** (0.009)	0.08*** (0.009)
<i>Maturity</i>	1.12*** (0.168)	1.11*** (0.168)	1.11*** (0.168)	0.01*** (0.001)	0.01*** (0.001)	0.01*** (0.001)			
<i>Number of Lenders</i>	-0.46 (0.337)	-0.13 (0.344)	0.27 (0.339)	0.01** (0.003)	0.01** (0.003)	0.01** (0.003)	0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)
<i>Firm Size</i>				-0.40*** (0.027)	-0.40*** (0.027)	-0.40*** (0.027)	-0.05*** (0.009)	-0.05*** (0.009)	-0.05*** (0.009)
<i>Leverage</i>	-0.07*** (0.017)	-0.07*** (0.017)	-0.07*** (0.017)	1.54*** (0.134)	1.54*** (0.135)	1.54*** (0.134)	0.32*** (0.034)	0.33*** (0.034)	0.33*** (0.034)

<i>Profitability</i>	0.35*** (0.056)	0.36*** (0.056)	0.35*** (0.056)	-3.23*** (0.326)	-3.24*** (0.327)	-3.23*** (0.326)	0.45*** (0.098)	0.46*** (0.098)	0.45*** (0.097)
<i>Interest rate</i>	0.08*** (0.028)	0.07** (0.028)	0.08*** (0.028)				-0.02 (0.083)	-0.03 (0.083)	-0.03 (0.083)
<i>Secured</i>	0.07*** (0.008)	0.07*** (0.008)	0.07*** (0.008)				0.23*** (0.020)	0.23*** (0.020)	0.23*** (0.020)
<i>PP_Indicator</i>	0.03*** (0.008)	0.04*** (0.008)	0.04*** (0.008)				0.25*** (0.019)	0.25*** (0.019)	0.25*** (0.019)
<i>Number of Financial Covenants</i>	0.01** (0.003)	0.01** (0.003)	0.01** (0.003)				0.06*** (0.007)	0.06*** (0.007)	0.06*** (0.007)
<i>Constant</i>	0.06** (0.027)	0.08*** (0.027)	0.07*** (0.027)	5.39*** -0.447	5.40*** -0.45	5.38*** -0.447	2.25*** -0.163	2.22*** -0.164	2.25*** -0.163
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	11,205	11,205	11,205	11,205	11,205	11,205	11,205	11,205	11,205
Adj. R-squared	0.14	0.14	0.14	0.30	0.30	0.30	0.27	0.27	0.27

In Table 5 we present results for the following specifications:

$$Loan\ Size\ (scaled\ by\ assets) = \alpha + \beta_1 QAO + \beta_2 After\_QAO + \beta_i CONTROLS + \varepsilon$$

$$P(Secured=1) = \alpha + \beta_1 QAO + \beta_2 After\_QAO + \beta_i CONTROLS + \varepsilon$$

$$Log(Maturity) = \alpha + \beta_1 QAO + \beta_2 After\_QAO + \beta_i CONTROLS + \varepsilon$$

In Column 1 we estimate the effect on loan size of a QAO where *Loan Size* is equal to the amount borrowed scaled by the borrower's assets. In Column 4 we estimate the probability that the lenders require a loan to be secured. The dependent variable is equal to one if the loan is secured, zero otherwise. Column 7 presents results of our estimate of the effect on loan maturity of a QAO. *Maturity* is the duration of the loan in months. Columns 2, 3, 5, 6, 8, and 9 examine the effect of relationships between a borrower and its lenders on our estimates. All variables are defined in the appendix.

Firm-specific financial variables are winsorized at the 0.01 level. Regressions include year fixed effects and standard errors are heteroskedasticity robust, clustered at the firm level. Robust standard errors are reported in parentheses. \*\*\*, \*\*, \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Table 6: The Use of Financial Ratios in Performance Pricing Provisions**

Variables	(1) PP Financial Ratio	(2) PP Financial Ratio	(3) PP Financial Ratio
<i>QAO</i>	-0.16** (0.064)	-0.08 (0.073)	-0.03 (0.080)
<i>After_QAO</i>	-0.04 (0.067)	-0.03 (0.082)	0.01 (0.086)
<i>Previous_Lender</i>		0.24*** (0.057)	
<i>QAO*Previous_Lender</i>		-0.18** (0.074)	
<i>After_QAO*Previous_Lender</i>		-0.05 (0.098)	
<i>Previous_Lead_Arranger</i>			0.17** (0.071)
<i>QAO*Previous_Lead_Arranger</i>			-0.26*** (0.097)
<i>After_QAO*Previous_Lead_Arranger</i>			-0.12 (0.114)
<i>InstitutionalInvestor</i>	0.18 (0.109)	0.19* (0.110)	0.18* (0.110)
<i>Revolver</i>	-0.10* (0.050)	-0.09* (0.050)	-0.09* (0.050)
<i>Interest rate</i>	0.00** (0.000)	0.00** (0.000)	0.00** (0.000)
<i>Secured</i>	0.38*** (0.072)	0.37*** (0.072)	0.38*** (0.072)
<i>Loan Size</i>	-0.25*** (0.038)	-0.27*** (0.038)	-0.26*** (0.038)
<i>maturity</i>	0.02*** (0.002)	0.02*** (0.002)	0.02*** (0.002)
<i>Number Lenders</i>	0.02*** (0.004)	0.01*** (0.004)	0.02*** (0.004)
<i>Firm Size</i>	-0.28*** (0.035)	-0.29*** (0.034)	-0.28*** (0.035)
<i>Leverage</i>	0.29** (0.141)	0.27* (0.140)	0.28** (0.141)
<i>Profitability</i>	1.81*** (0.418)	1.72*** (0.416)	1.80*** (0.417)

<i>Constant</i>	(0.840) -0.66	(0.740) -0.655	(0.930) -0.66
<i>Year dummy</i>	Yes	Yes	Yes
<i>Observations</i>	7,232	7,232	7,232
<i>Adj. R-squared</i>	0.29	0.30	0.29

Table 6 presents the results from the estimation of the following performance pricing provision ratio (PP Ratio) model:

$$P(PP\ Ratio = 1) = \alpha + \beta_1 QAO + \beta_2 After\_QAO + \beta_i CONTROLS + \varepsilon$$

We estimate the probability of using accounting-based performance pricing provisions in Column 1; *PP Ratio* is equal to 1 when an accounting-based ratio is used in a performance pricing provision. Columns 2 and 3 investigate the effects of long-term relationships between borrowers and lenders on the likelihood of using an accounting-based performance pricing provision. Firm-specific financial variables are winsorized at 0.01 level. Regressions include year fixed effects and standard errors are heteroskedasticity robust, clustered at the firm level. Robust standard errors are reported in parentheses. \*\*\*, \*\*, \* denote significance at the 1%, 5%, and 10% levels, respectively. All control variables are defined in the appendix.

**Table 7: The Incremental Effect of Auditor Opinion on Loan Terms after Controlling for Accounting Quality**

**Panel A: Effect of Qualified Audit Opinions on Interest Rate after Controlling for Information in the Financial Statements**

Variables	(1) Interest Rate	(2) Interest Rate	(3) Interest Rate	(4) Interest Rate	(5) Interest Rate	(6) Interest Rate
<i>QAO</i>			18.01*** (3.995)	12.42*** (4.218)		12.57*** (4.232)
<i>After_QAO</i>			9.09*** (3.519)	5.53 (3.601)		5.30 (3.629)
<i>Abnormal_Accruals</i>	79.02*** (23.609)		78.70*** (23.382)		69.57*** (26.187)	69.68*** (26.041)
<i>Accrual_Noise</i>		177.21*** (36.555)		173.48*** (36.372)	135.63*** (35.038)	131.78*** (34.976)
<i>Control variables</i>	Included	Included	Included	Included	Included	Included
<i>Constant</i>	427.87*** (26.276)	403.96*** (27.067)	426.05*** (26.062)	403.43*** (26.921)	401.89*** (27.296)	401.43*** (27.142)
Observations	10,622	9,767	10,622	9,767	9,677	9,677
R-squared	0.49	0.49	0.49	0.49	0.50	0.50
Adj. R-squared	0.48	0.49	0.49	0.49	0.49	0.49

**Panel B: Effect of Qualified Auditor Opinions on the Use of Financial Covenants after Controlling for Information in the Financial Statements**

Variables	(1) Financial Covenants	(2) Financial Covenants	(3) Financial Covenants	(4) Financial Covenants	(5) Financial Covenants	(6) Financial Covenants
<i>QAO</i>			-0.09* (0.048)	-0.10** (0.049)		-0.09* (0.049)
<i>After_QAO</i>			-0.11** (0.050)	-0.09* (0.052)		-0.09* (0.052)
<i>Abnormal_Accruals</i>	-0.87*** (0.229)		-0.88*** (0.230)		-0.71*** (0.267)	-0.71*** (0.268)
<i>Accrual_Noise</i>		-0.89** -0.444		-0.86* (0.445)	-0.50 (0.482)	-0.46 (0.483)
<i>Control variables</i>	Included	Included	Included	Included	Included	Included
<i>Constant</i>	0.70** (0.310)	0.43 (0.310)	0.71** (0.309)	0.43 (0.309)	0.47 (0.311)	0.48 (0.310)
Observations	10,622	9,767	10,622	9,767	9,677	9,677
R-squared	0.32	0.31	0.32	0.31	0.32	0.32
Adj. R-squared	0.32	0.31	0.32	0.31	0.31	0.31

Table 7 presents the effects of a qualified audit opinion on debt contracting terms after controlling for two measures of accounting quality. Abnormal accruals (*Abnormal\_Accruals*) is defined in Ashbaugh-Skaife et al. 2008 and accruals noise (*Accruals\_Noise*) follows Dechow and Dichev 2002 and Kothari et al. 2005. All control variables from Tables 4 and 5 are included.

Panel A presents the results from the estimation of the interest rate model in Table 4. Panel B presents the results from the financial covenant model as Table 5. Firm-specific financial variables are winsorized at the 0.01 level. Regressions include year fixed effects and standard errors are heteroskedasticity robust, clustered at the firm level. Robust standard errors are reported in parentheses. \*\*\*, \*\*, \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Table 8: Lender Response to a Qualified Audit Opinion and Disclosed Internal Control Weaknesses**

**Panel A: Effect of Auditor Opinion on Interest Rate After Controlling for Disclosure of an Internal Control Weakness**

Variables	(1) Interest Rate	(2) Interest Rate	(3) Interest Rate	(4) Interest Rate	(5) Interest Rate
<i>QAO</i>		15.68*** (3.538)	15.84*** (3.571)	12.84*** (3.715)	12.66*** (3.713)
<i>ICW</i>	34.35*** (9.878)	34.19*** (9.934)	33.33*** (10.033)	22.83** (8.978)	22.60** (9.080)
<i>Abnormal_Accruals</i>			87.00*** (27.567)		62.94** (30.427)
<i>Accrual_Noise</i>				194.18*** (42.037)	155.65*** (43.531)
<i>Control variables</i>	Included	Included	Included	Included	Included
<i>Constant</i>	433.31*** (27.790)	426.64*** (27.601)	422.66*** (28.544)	400.16*** (29.896)	398.84*** (30.087)
Observations	10,277	10,277	9,957	9,231	9,172
R-squared	0.47	0.47	0.47	0.48	0.48
Adj. R-squared	0.47	0.47	0.47	0.48	0.48

**Panel B: Effect of Auditor Opinion on Covenant Use After Controlling for Disclosure of an Internal Control Weakness**

Variables	(1) Financial Covenants	(2) Financial Covenants	(3) Financial Covenants	(4) Financial Covenants	(5) Financial Covenants
<i>QAO</i>		-0.11*** (0.039)	-0.10** (0.039)	-0.09** (0.040)	-0.08** (0.040)
<i>ICW</i>	0.09 (0.084)	0.09 (0.084)	0.09 (0.083)	0.12 (0.089)	0.13 (0.088)
<i>Abnormal_Accruals</i>			-0.93*** (0.213)		-1.01*** (0.232)
<i>Accrual_Noise</i>				-0.92** (0.379)	-0.33 (0.393)
<i>Control variables</i>	Included	Included	Included	Included	Included
<i>Constant</i>	3.23*** (0.304)	3.26*** (0.303)	3.37*** (0.308)	3.40*** (0.316)	3.40*** (0.315)
Observations	10,277	10,277	9,957	9,231	9,172
R-squared	0.25	0.25	0.25	0.25	0.25
Adj. R-squared	0.25	0.25	0.25	0.25	0.25

Table 8 presents the effects of a qualified audit opinion on debt contracting terms after controlling for two measures of accounting quality and also the disclosure of an internal control weakness. Abnormal accruals (*Abnormal\_Accruals*) as defined in Ashbaugh-Skaife et al. 2008 and accruals noise (*Accruals\_Noise*) follows Dechow and Dichev 2002 and Kothari et al. 2005. *ICW* is an indicator variable that is equal to one when a firm discloses an internal control weakness. All control variables from Tables 4 and 5 are included.

Panel A presents the results from the estimation of the interest rate model in Table 4 and includes *Abnormal\_Accruals*, *Accruals\_Noise*, and *ICW*. Panel B presents the results from the financial covenant model in Table 5. Firm-specific financial variables are winsorized at the 0.01 level. Regressions include year fixed effects and standard errors are heteroskedasticity robust, clustered at the firm level. Robust standard errors are reported in parentheses. \*\*\*, \*\*, \* denote significance at the 1%, 5%, and 10% levels, respectively.

## REFERENCES

- Acharya, V., Bharath, S., Srinivasan, A., 2007. Does industry-wide distress affect defaulted firms? Evidence from creditor recoveries. *Journal of Financial Economics* 85, No. 3: 787–821.
- Aghion, P., Bolton, P., 1992. An incomplete contracts approach to financial contracting. *Review of Economic Studies* 59, 473-94.
- Altman, E., 1968. Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *Journal of Finance* 23, 589-609.
- Amiram, D., 2012. Debt Contracts, Loss Given Default and Accounting Information. Columbia University Working paper.
- Armstrong, C., Guay, W., Weber, J., 2010. The role of information and financial reporting in corporate governance and debt contracting. *Journal of Accounting and Economics* 50, 179-234.
- Ashbaugh-Skaife, H., Collins, D., Kinney, W., LaFond, R., 2008. The Effect of SOX Internal Control Deficiencies and Their Remediation on Accrual Quality. *The Accounting Review* Vol. 83: 217-250.
- Asquith, P., Beatty, A., Weber, J., 2005. Performance pricing in bank debt contracts. *Journal of Accounting and Economics* 40, 101-28.
- Ball, R., 2001. Infrastructure requirements for an economically efficient system of public financial reporting and disclosure. *Brookings-Wharton Papers on Financial Services*, 127-69.
- Ball, R., Brown, P., 1968. An empirical evaluation of accounting income numbers. *Journal of Accounting Research* 6, 159-178.
- Ball, R., Bushman, R., Vasvari, F., 2008. The debt-contracting value of accounting information and loan syndicate structure. *Journal of Accounting Research* 46, 247-87.
- Barton, J., Simko, P., 2002. The balance sheet as an earnings management constraint. *Accounting Review* 77, 1-27.
- Beatty, A., Ramesh, K., Weber, J., 2002. The importance of accounting changes in debt contracts: The cost of flexibility in covenant calculations. *Journal of Accounting & Economics* 33, 205-27.
- Beaver, W., 1966. Financial Ratios As Predictors of Failure. *Journal of Accounting Research* 4, 71-111.
- Beaver, W., 1968. The information content of annual earnings announcements. *Journal of Accounting Research* 6, 67-92.
- Beneish, M., Press, E., 1993. Costs of technical violation of accounting-based debt covenants. *The Accounting Review* 68, 233-257.
- Beneish, M., Press, E., 1995. The resolution of technical default. *The Accounting Review* 70, 337-353.
- Bharath, S., Dahiya, S., Saunders, A., Srinivasan, A., 2007. So what do I get? The bank's view of lending relationships. *Journal of Financial Economics* 85, 368-419.
- Bharath, S., Sunder, J., Sunder, S., 2008. Accounting Quality and Debt Contracting. *The Accounting Review* 83, 1-28.
- Bharath, S., Dahiya, S., Saunders, A., Srinivasan, A., 2011. Lending relationships and loan contract terms. *The Review of Financial Studies* 24, 1141.
- Bradley, M., and M. Roberts. 2004. The structure and pricing of corporate debt covenants. University of Pennsylvania Working paper.
- Campbell, J., Mutchler, J., 1988. The 'expectations gap' and going-concern uncertainties. *Accounting Horizons* 2, 42.
- Chen, K., and Church, B., 1996. Going concern opinions and the market's reaction to bankruptcy filings. *The Accounting Review* Vol. 71: 117-28.

- Choi, S., Jeter, D., 1992. The effects of qualified audit opinions on earnings response coefficients. *Journal of Accounting and Economics* 15, 229-47.
- Christensen, H., Nikolaev, V., 2012. Capital versus performance covenants in debt contracts. *Journal of Accounting Research* 50, 75-116.
- Core, J., Schrand, C., 1999. The effect of accounting-based debt covenants on equity valuation. *Journal of Accounting & Economics* 27, 1-34.
- Costello, A., Wittenberg-Moerman, R., 2011. The impact of financial reporting quality on debt contracting: Evidence from internal control weakness reports. *Journal of Accounting Research* 49, 97-136.
- Dechow, P., Dichev, I., 2002. The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *The Accounting Review* Vol. 77: 35-59.
- Dechow, P., Sloan R., Sweeney A., 1995. Detecting Earnings Management. *The Accounting Review* 70,193-225.
- Dechow, P., Ge, W., Schrand, C., 2010. Understanding earnings quality A review of the proxies, their determinants and their consequences. *Journal of Accounting & Economics* 50, 344.
- DeFond, M., Francis, J., 2005. Audit research after Sarbanes-Oxley. *Auditing: A Journal of Practice & Theory* 24: 5-30.
- Demiroglu, C., James, C., 2010. The information content of bank loan covenants. *The Review of Financial Studies* 23, 3700.
- Dhaliwal, D., Hogan, C., Trezevant, R., Wilkins, M., 2011. Internal control disclosures, monitoring, and the cost of debt. *The Accounting Review* 86, 1131-56.
- Diamond, D., 1984. Financial intermediation and delegated monitoring. *Review of Economic Studies* 51, 393-414.
- Dichev, I., Skinner, D., 2002. Large-sample evidence on the debt covenant hypothesis. *Journal of Accounting Research* 40, 1091-1123.
- Dodd, P., Dopuch, N., Holthausen, R., Leftwich, R., 1984. Qualified audit opinions and stock prices: Information content, announcement dates, and concurrent disclosures. *Journal of Accounting and Economics* 6, 3-38.
- Dopuch, N., Holthausen, R., Leftwich, R., 1986. Abnormal stock returns associated with media disclosures of 'subject to' qualified audit opinions. *Journal of Accounting and Economics* 8, 93-117.
- Doyle, J., Ge, W., McVay, S., 2007. Determinants of weaknesses in internal control over financial reporting. *Journal of Accounting and Economics* 44, 193-223.
- Duffie, D., Lando, D., 2001. Term structures of credit spreads with incomplete accounting information. *Econometrica* 69, 633-64.
- Easley, D., O'Hara, M., 2004. Information and the cost of capital. *Journal of Finance* 59, 1553-83.
- Fortin, S., Pittman, J., 2007. The Role of Auditor Choice in Debt Pricing in Private Firms. *Contemporary Accounting Research* Vol. 24, No. 3: 859-896.
- Francis, J., LaFond, R., Olsson, P., Schipper, K., 2004. Costs of equity and earnings attributes. *The Accounting Review* 79, No. 4: 967-1010.
- Francis, J., 2004. What do we know about audit quality? *The British Accounting Review* 36: 345-368.
- Francis, J., Khurana, I., Pereira, R., 2005. Disclosure incentives and effects on cost of capital around the world. *The Accounting Review* 80, 1125-62.
- Gigler, F., Kanodia, C., Sapra, H., Venugopalan, R., 2009. Accounting conservatism and the efficiency of debt contracts. *Journal of Accounting Research* 47, 767-97.
- Healy, P., 1985. The Effect of Bonus Schemes on Accounting Decisions. *Journal of Accounting and Economics* 7:85-107.
- Healy, P., Palepu, K., 2001. Information asymmetry, corporate disclosure, and the capital markets A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31, 405-40.

- Holmstrom, B., Tirole, J., 1997. Financial intermediation, loanable funds, and the real sector. *Quarterly Journal of Economics* 112, 663-91.
- Jaffee, D., Thomas, R., 1976. Imperfect Information, Uncertainty, and Credit Rationing. *Quarterly Journal of Economics* 90, pp. 651–66.
- Jensen, M., Meckling, W., 1976. Theory of the firm Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3, 305-60.
- Jones, J., 1991. Earnings Management During Import Relief Investigations. *Journal of Accounting Research* Vol. 29: 193-228.
- Jones, F., 1999. The information content of the auditor's going concern evaluation. *Journal of Accounting and Public Policy* 15 (1): 1-27.
- Kim, J., Song, B., Zhang, L., 2011. Internal Control Weakness and Bank Loan Contracting: Evidence from SOX Section 404 Disclosures. *The Accounting Review* Vol. 86: 1157-88.
- Kothari, SP, Leone, A., Wasley, C., 2005. Performance matched discretionary accrual measures. *Journal of Accounting and Economics* 39: 163-97.
- Lambert, R., Leuz, C., Verrecchia, R., 2007. Accounting information, disclosure, and the cost of capital. *Journal of Accounting Research* 45, 385-420.
- Leftwich, R., 1983. Accounting information in private markets Evidence from private lending agreements. *The Accounting Review* 58, 23-42.
- Leland, H., Pyle, D., 1977. Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance* 32, 371-87.
- Louder, M., Khurana, I., Sawyers, R., Cordery, C., Johnson, C., Lowe, J., Wunderle, R., 1992. The information content of audit qualifications. *Auditing: A Journal of Practice and Theory* 11: 69-82.
- Lev, B., 1989. On the usefulness of earnings and earnings research: Lessons from two decades of empirical research. *Journal of Accounting Research* 27: 153-192.
- Mansi, S., Maxwell, W., Miller, D., 2004. Does auditor quality and tenure matter to investors? Evidence from the bond market. *Journal of Accounting Research* 42, 755-93.
- Melnik, A., Plaut, S., 1986. Loan commitment contracts, terms of lending, and credit allocation. *The Journal of Finance* 41, 425.
- Nini, G., Smith, D., Sufi, A., 2009. Creditor control rights, corporate governance, and firm value. University of Chicago Working Paper.
- Ohlson, J., 1980. Financial ratios and the probabilistic prediction of bankruptcy. *Journal of Accounting Research* 18, 109-31.
- Pittman, J., Fortin, S., 2004. Auditor choice and the cost of debt capital for newly public firms. *Journal of Accounting and Economics* 37: 113-36.
- Smith, C., Warner, J., 1979. On financial contracting: An analysis of bond covenants. *Journal of Financial Economics* 7, 117-61.
- Stice, D., 2012. The Market Response to Implied Debt Covenant Violations. Hong Kong University of Science & Technology Working paper.
- Stiglitz, J., Weiss, A., 1981. Credit Rationing in Markets with Imperfect Information, *The American Economic Review* Vol. 71, No. 3, pp. 393-410.
- Sufi, A., 2007. Information asymmetry and financing arrangements: Evidence from syndicated loans. *Journal of Finance* 62, 629-68.
- Tirole, J., 2007. *The theory of corporate finance*. Princeton University Press, Princeton, NJ.
- Varma, P., Cantor, R., 2005. Determinants of recovery rates on defaulted bonds and loans for North American corporate issuers. *The Journal of Fixed Income* 14, 29-44.
- Watts, R., Zimmerman, J., 1978. Towards a Positive Theory of the Determination of Accounting Standards. *The Accounting Review* 53, 112-134.
- Watts, R., Zimmerman, J., 1986. *Positive accounting theory*. Contemporary Topics in Accounting Series. Englewood Cliffs, N.J. Prentice-Hall.
- Watts, R., Zimmerman, J., 1990. Positive accounting theory: A ten year perspective. *The Accounting Review*, 131-56.