



Do firms follow the SEC's confidential treatment protocols? Evidence from credit agreements

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Abstract

I examine whether firms follow the Securities and Exchange Commission's confidential treatment protocols when redacting potentially material information from their credit agreements. My findings suggest that most firms may not comply with SEC directives: they withhold potentially material information without following the SEC's confidential treatment protocols and without making interested parties aware of their information disadvantage. I also find evidence consistent with lender and borrower incentives driving the decision to withhold potentially material information from the credit agreement. My findings are consistent with lenders influencing redaction decisions not out of concern about rivals but because they do not want their other borrowers to see the terms. Finally, I find that the Refinitiv / LPC Dealscan database rarely includes redacted fee data, thus leading to potential biases when fees are included in cost of debt measures.

Keywords SEC Noncompliance · Disclosure · Banks · Redacted credit agreements · Fees

JEL classifications G32 · G21 · C78 · L14

1 Introduction

According to US securities law, firms must disclose material information to investors and other interested parties. However, firms can avoid disclosure by obtaining permission from the Securities and Exchange Commission to redact information (Verrecchia and Weber 2006). In this study, I provide evidence about whether firms

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follow the SEC's protocols when redacting information from credit agreements. I focus on two types of redactions. The first is the disclosed redaction of information, where investors can clearly observe the redaction in the contract. The second redaction is more subtle, where the loan contract refers to supplemental schedules, agreements, or other documents that are not uploaded to the EDGAR database. This type of redaction could reflect a direct violation of the SEC disclosure requirements or a crafty design of the loan agreement into separate components to avoid public disclosure. In addition, I investigate the incentives that drive the redaction decision. For instance, lenders might want borrowers to withhold information so that current and future borrowers cannot compare contract terms. Borrowers might wish to withhold information about unfavorable terms that could lower their share prices.

Regulation S-K requires firms to disclose all material agreements in forms 8-K, 10-K, and 10-Q, or in registration statements. If a contract is definitively material—meaning that the firm's auditors, the SEC, and the plaintiffs' bar conclude that an average investor ought to be informed about it—then the firm must disclose that contract. Loan contracts usually meet this threshold and thus must be disclosed. The SEC gives firms an element of discretion by allowing them to request that nonmaterial proprietary information within such a contract be withheld.¹

To request confidential treatment, firms must file, with the SEC, the document containing the sensitive material in redacted form. The applicant must omit all confidential information from that exhibit and must mark it to indicate where it has omitted information. The filing must indicate, at the appropriate places in the exhibit, that the confidential information has been filed separately with the SEC. The firm also must submit a detailed application identifying the text for which the confidential treatment was sought, a statement of the legal grounds for the exemption, and an explanation of why disclosure of the information is unnecessary for the protection of investors.²

In 2019, the SEC revised its rules so that registrants may now omit confidential information from material contracts without needing to submit a confidential treatment request if the information (1) is not material and (2) would be competitively harmful if publicly disclosed.³ Though this new ruling does not apply to my sample period, what remains unchanged is that the registrant is still responsible for determining whether all material information has been disclosed and whether it may redact certain information under the new rules. Just as under the old rules, the revised rules still require registrants to (1) file the document in question, (2) mark the exhibit index to indicate that portions of the exhibit or exhibits have been omitted, (3) include a prominent statement, on the first page of the redacted exhibit, that certain identified information has been excluded from the exhibit because it both (a) is not material and (b) would be competitively harmful if publicly disclosed, and (4) indicate, with brackets, where the information has been omitted.

Anecdotal evidence suggests that contracts often omit disclosing certain fees that lenders charge and exhibits and schedules that provide additional information about

¹ For example, see <https://www.sec.gov/files/form8-k.pdf>.

² <https://www.sec.gov/corpfin/confidential-treatment-applications>.

³ <https://www.sec.gov/corpfin/announcement/new-rules-and-procedures-exhibits-containing-immaterial>.

collateral, compliance, and other topics.⁴ In particular, contracts often refer to separate fee letters that are kept confidential. This practice may violate SEC directives (including those revised in 2019) to the extent that the contracts fail to disclose that information has been redacted or that the redacted information is material.⁵

Because the data for this study are not available in machine-readable form, I hand-collected information from a large sample of credit agreements to determine whether and what potentially material information is not being disclosed, and whether firms do this according to SEC guidelines. To increase my chances of finding results while keeping the hand-collection manageable, I focus, in my tests, on credit agreements with capital expenditure covenants, which are associated with high agency costs (Nini et al. 2009).⁶ These borrowers likely would benefit more from increased monitoring by lenders but are also more credit-constrained.

I classify credit agreements as being redacted if either of the following two scenarios applies: (1) a firm requests SEC permission to withhold information from investors in its loan contract filings, or (2) some or all fees charged by lenders are detailed in a separate, undisclosed document or fee letter. I focus on fees because they are a material component of the cost of borrowing (Berg et al. 2016).⁷ Lenders charge a variety of fees (e.g., commitment fees, letter-of-credit fees, origination fees, administrative-agent fees, monitoring fees, late fees, auditing fees) that increase the cost of financing.

I find that almost 73% of the contracts in my sample are redacted. However, surprisingly, less than 1% of the contracts in my sample stipulate that the borrower requested permission from the SEC to withhold information. Fee information is often withheld without SEC approval and without prominently making interested parties aware of their information disadvantage, suggesting that firms may not follow the SEC's confidential treatment protocols.

To estimate the materiality of the redacted fees, I use information from seven confidential fee letters that I was able to obtain. The number of fees mentioned in those side letters varies significantly, from two to six. Using conservative assumptions, I estimate the average annualized impact of those redacted fees on the income statement to be 1.11% of the loan amount—equivalent to 39.6% of the average loan spread of 2.80% of firms in my sample.

The estimated redacted fees relative to total assets have a mean of 0.5% and a median of 0.4%. In terms of relevance relative to firm profitability, for the median firm the absolute value of the estimated redacted fees-to-assets of 0.4% represents

⁴ I am grateful for the numerous discussions I have had on this topic with practitioners working in financial institutions and lawyers who specialize in syndicated loan contracts.

⁵ On its website, the SEC indicates that “we do not permit filers to omit material information from an exhibit, even if it has been previously treated as confidential by the applicant.” See <https://www.sec.gov/corpfin/confidential-treatment-applications>. See also Willcox (2022).

⁶ Credit agreements with this covenant correspond to about 25% of all the contracts available in Dealscan.

⁷ The SEC lists interest expense, the identity of a 10% customer, the dollar amount of backlog orders, the duration and effect of intangibles, required disclosures in the MD&A, and related party transactions as ineligible for confidential treatment (Sect. 1997). As a result, and to the extent that fees can be considered a form of interest expense, submitting requests to redact fee information might not be an option that many firms take into consideration.

almost 20% of the median net income-to-assets (ROA) of 1.8% at loan initiation. As a result, the magnitude of the redacted fee expenses, of which financial-statement users have no clear visibility, is potentially material.

In summary, the nondisclosure of these fees may be contrary to the SEC's confidential treatment protocols because firms do not prominently disclose that fee information has been omitted and because the SEC directives do not allow unauthorized redaction of material information. Alternatively, this type of redaction could reflect a crafty design of the loan agreement into separate components to avoid public disclosure. Regardless, this form of non-disclosure prevents market participants from observing important elements of the loan contract in a manner that is less observable than the confidential treatment process.

Next, I develop hypotheses about the incentives that drive the redaction decision. My first prediction builds on the idea that lenders seek compensation when they invest in monitoring the borrower (Sharpe 1990; Petersen and Rajan 1994). Lenders may review borrowers' disclosures and suggest redactions. I predict that when lenders invest more in monitoring the borrower, credit agreements are more likely to be redacted. To ensure compensation for their costly due diligence and monitoring efforts, lenders might request that borrowers redact information that would either reveal credit terms to other borrowers or invite other lenders to compete for the borrower's business.

To test this, I use the number of covenants and the complexity of the capital expenditure covenant in the contract as measures for direct monitoring. Borrowers might agree to redactions because banks can serve as an efficient monitor (Diamond 1984, 1991; Beatty et al. 2012; Li et al. 2016; Carrizosa and Ryan 2017). Consistent with my first prediction, I find a significant positive relation between lender monitoring and redacted credit agreements. Contracts with more covenants or more complex capital expenditure covenants are more likely to have potentially material information redacted. This finding is consistent with lenders being more likely to request that material information be withheld when they invest more in monitoring.

My second prediction builds on the idea that borrowers are more likely to redact information that sends negative signals to the market (Caskey et al. 2023). Specifically, some loan characteristics might indicate that the firm faces credit constraints, and redacting that information makes it less likely that investors will impound it into the stock price. For example, managers might want to obscure high fees because those fees could send a negative signal to stakeholders about firm risk.

To proxy for credit constraints, I use excess loan spreads relative to other loans issued by borrowers in the same industry, and whether the borrower has no credit rating. Consistent with this prediction, I find that both higher loans spreads and not having a credit rating are positively associated with withholding contract information. This finding suggests that credit-constrained borrowers obscure disclosures that could harm them.

I also find evidence consistent with lenders requesting that borrowers withhold information that would advantage other borrowers. I find that borrowers with redacted credit agreements are more likely to take out their next loan with the current lead arranger. However, I do not find a significant relation between redaction and the cost of future loans, which suggests that lenders do not request redaction to help

them hold up the borrower. Rather, the evidence is consistent with lenders requesting the redaction of information that might benefit their other borrowers. In exchange, borrowers benefit from the increased bank monitoring and the continuation of the relationship via their next loan.

Further, for a subsample of contracts, I find that the Refinitiv / LPC Dealscan database rarely includes redacted fee data. This further strengthens the case that the contracting parties have incentives to hide fee data from the public. It also suggests that LPC may have biased fee data.

Finally, I investigate other information that is omitted from the credit agreements. For a subsample of contracts, I find that 20% are missing information about contract terms, such as the shares assigned to each member of the loan syndicate; 29% are missing exhibits and schedules related to compliance; 62% are missing information about loan collateral; 29% are missing investment information; and 38% are missing litigation information. Finally, 69% of the contracts are missing company information, including labor disputes, environmental violations, taxes, employee plans, debt, intellectual property, or related-party transactions.

My study contributes to the literature by providing new insights into noncompliance with SEC directives. My findings suggest that firms often may not follow the SEC's confidential treatment protocols when redacting potentially material information from their credit agreements. For example, firms frequently do not submit confidential treatment requests to redact fee information although it reflects an important component of the cost of debt. Though I focus here on debt contracts, my findings might indicate how firms redact information from other material contracts. Whether firms are violating the regulation or violating the spirit of the regulation by being clever in the contract design, the SEC might want to consider closing down this form of non-disclosure or at least making it more observable to investors.

This paper also contributes to the literature by showing that lender incentives influence mandatory disclosures. Though lenders are a major source of financing to corporations, little is known about whether and how they shape mandatory corporate disclosures. By providing evidence that lenders help shape disclosures in the credit agreement, my findings add new insights to a larger literature that investigates the determinants and consequences of disclosures. (For recent reviews, see Leuz and Wysocki (2016), Roychowdhury et al. (2019), and Blankespoor et al. (2020).) Finally, my finding that the Refinitiv / LPC Dealscan database rarely includes redacted fee data suggests that this database may have biased data, thus potentially affecting analyses that include fees in cost of debt measures such as the *All-in-Drawn Spread* provided by Dealscan.

The rest of this paper is organized as follows: Sect. 2 discusses prior research, the institutional background, and empirical predictions. Section 3 presents the data and main variables. Section 4 discusses the results. Section 5 presents additional tests. Section 6 concludes.

2 Prior research, institutional background, and predictions

2.1 Prior research

My study relates to research on noncompliance with SEC directives. For example, Schwartz and Soo (1996) identify noncompliance with SEC regulations requiring prompt disclosure of auditor changes. Robinson et al. (2011) study noncompliance with mandatory compensation disclosures. Caskey et al. (2023) study noncompliance with timely loan disclosures. My study differs in that it provides evidence that parties to credit agreements often withhold potentially material information without SEC approval.

My study is closely related to Verrecchia and Weber (2006), who find that requests for confidential treatment submitted to the SEC are associated with a worsening of measures of adverse selection. In particular, the authors show that when firms redact information, contemporaneous measures of the adverse-selection component of the bid-ask spread rise, market depth deteriorates, and share turnover falls. They also find that firms are less likely to redact when they issue long-term debt and are more likely to redact when they are in a competitive industry or experience losses. Boone et al. (2016) document greater IPO underpricing among companies that request confidential treatment. Glaeser (2018) finds that firms pursuing a corporate strategy that involves trade secrecy and firms located in states that have adopted the Uniform Trade Secrets Act are more likely to request confidential treatment. Heinle et al. (2022) develop and test a theoretical model predicting that companies increase voluntary disclosure when they redact mandatory disclosures, which is consistent with the earlier findings in Glaeser (2018). Thompson (2022) provides evidence that companies' political connections are associated with the SEC's decisions to grant confidential treatment for presumably proprietary information. Bao et al. (2022) provide evidence that managers use confidential treatment requests to conceal bad news. Thompson et al. (2022) find that at least some legally immaterial redacted information is economically material to investors. My findings extend this research by showing that firms redact information even though they have not solicited permission from the SEC.

My study also relates to a number of papers that examine how lenders affect voluntary disclosures. Vashishtha (2014) finds that firms reduce management forecasts following covenant violations. A series of analyses suggests that part of this decline in disclosure reflects a delegation of monitoring, to banks, by shareholders who consequently demand less disclosure. Lo (2014) examines whether declines in banks' financial health affect their borrowers' voluntary disclosures. Using the emerging-market financial crises in the late 1990s as shocks to the health of certain US banks, Lo finds that the affected banks' US borrowers increase both the quantity and informativeness of their management forecasts following these shocks, compared to the borrowers of unaffected banks. Chen and Vashishtha (2017) use the incidence of conference calls as their main measure of disclosure and find that borrowers significantly increase disclosure after their lending banks merge or acquire. My study complements these studies by showing that lenders' incentives help shape borrower's mandatory disclosures in credit agreements so that other borrowers cannot see contract terms.

2.2 Institutional background

Regulation S-K requires that firms file their material debt contracts with their 8-K, 10-K, or 10-Q. The borrower can, however, ask the SEC to allow nonmaterial proprietary information in the contract to be redacted. To request confidential treatment, firms must file, with the SEC, the document containing the sensitive material in redacted form. The applicant must omit all confidential information from that exhibit and must mark it to indicate where it has done so. The filing must indicate, at the appropriate places in the exhibit, that the confidential information has been filed separately with the SEC. The firm also must submit a detailed application identifying the text for which confidential treatment is being sought, a statement of the legal grounds for the exemption, and an explanation of why disclosure of the information is unnecessary for the protection of investors.⁸ Requests for confidential treatment are usually approved by the SEC and are relatively inexpensive.⁹

Based on anecdotal evidence, borrowers often do not closely follow the SEC directives when it comes to fee letters or ancillary documents, such as schedules, exhibits, and collateral documents. These documents often contain material information that is not disclosed to the public. For example, fee letters detail the fee structure of the contract.

2.3 Main predictions

As mentioned earlier, my first prediction is that the investment made by lenders in monitoring the borrower relates to the likelihood of a redaction of material information in credit agreements. Lenders do not want to divulge information such as the fees they charge, to protect their profits and to keep other customers unaware about them. Anecdotal evidence suggests that this is common practice in the industry (Willcox 2022). The following excerpt of the fee letter delivered by JP Morgan Chase Bank to U.S.I. Holdings Corporation, dated January 31, 2003, is consistent with the argument that banks have incentives to redact information:¹⁰

⁸ In 2019, the SEC Revised Item 601(b)(10) so that registrants may now omit confidential information from material contracts filed pursuant to that item without the need to submit a confidential treatment request, if the information (1) is not material and (2) would be competitively harmful if publicly disclosed. Registrants are no longer required to file a confidential treatment request in accordance with Rule 406 or Rule 24b-2 in connection with the redacted exhibit. However, the responsibility of a registrant to determine whether all material information has been disclosed and whether it may redact the information under the proposed rules remains unchanged. Redactions made in accordance with the revised Item 601(b)(10) should include no more information than is necessary to prevent competitive harm to the registrant. Under the revision, the requirements for marking exhibits subject to confidential treatment remain in place as well. Just as registrants were required to do under the old rules, the revisions still require registrants to (1) file the document in question, (2) mark the exhibit index to indicate that portions of the exhibit or exhibits have been omitted, (3) include a prominent statement, on the first page of the redacted exhibit, that certain identified information has been excluded from the exhibit because it both (i) is not material and (ii) would be competitively harmful if publicly disclosed, and (4) indicate, with brackets, where the information has been omitted from the filed version of the exhibit.

⁹ External lawyer fees to prepare these filings normally range from \$5,000 to \$20,000.

¹⁰ <https://www.sec.gov/Archives/edgar/data/1102643/000102140803001978/dex102.htm>.

This Fee Letter is delivered to you on the understanding that neither this Fee Letter nor any of its terms or substance shall be disclosed, directly or indirectly, to any other person except (a) to your officers, agents and advisors who are directly involved in the consideration of this matter or (b) as may be compelled in a judicial or administrative proceeding or as otherwise required by law (in which case you agree to inform us promptly thereof).

I expect that loan contracts with more covenants or complex covenants are more likely to be redacted. The idea is that, in those cases, lenders must exert greater effort in monitoring the borrower (including because of higher likelihood of future renegotiations of the contract) and thus request redaction to compensate for that effort. The larger the number of covenants is or the more detailed the covenants are, the more lenders need to track metrics related to those covenants and the more likely it is that the contract will be renegotiated, requiring extra lender effort.¹¹ Shareholders, in turn, will be willing to accept the redaction of credit agreements if in return they benefit from the increased monitoring provided by lenders.¹²

My second prediction is that, when borrowers are credit-constrained, their incentives to withhold material information (such as loan fees) from loan agreements increase. By reducing disclosure, borrowers avoid disclosing high fees that could send a negative signal about their credit quality and true cost of raising debt. I use two variables to proxy for credit constraints: excess loan spreads relative to other loans issued by borrowers in the same industry, and whether the borrower has no credit rating.

3 Data

3.1 Sample

To determine whether and what parts of credit agreements have been redacted while keeping hand-collection manageable, I focus on a sample of firms with significant due diligence needs: Nini et al. (2009) suggest that contracts with a capital expenditure covenant are particularly sensitive to monitoring needs.¹³ I start with Dealscan observations that I can link to Compustat using the Roberts Dealscan–Compustat link (August 2012 vintage; see Chava and Roberts (2008)). I also require sufficient data on loan terms and control variables. Consistent with prior research, I exclude financial

¹¹ As detailed in Sect. 3.4, capital expenditure covenants that are classified as more complex often are contingent on performance metrics such as EBITDA. Christensen and Nikolaev (2012) provide evidence that covenants tied to performance metrics such as EBITDA are more likely to lead to future renegotiations.

¹² For example, lenders often use working capital or liquidity covenants to monitor the borrower. The contract will specify that the firm's working capital not fall below some minimum. If this covenant is violated, the lead lender, as delegated monitor, can determine whether the shortfall is necessary (e.g., to buy inventory for growing the business) or the borrower is in financial trouble. If each shareholder were to monitor the firm's cash balances, then this would be extremely inefficient and costly.

¹³ Despite credit agreements with this covenant corresponding to about 25% of all the contracts available in Dealscan, I acknowledge the sample selection limitations.

(SIC 6000–6999) and regulated (4900–4999) firms. I also exclude contracts without financial-covenant information to ensure that the information collected by Dealscan is reliable.¹⁴ This yields 11,017 deal packages issued between 1995 and 2012.¹⁵ Of these, 2,645 have a capital expenditure covenant.

Finally, to determine whether loan agreements are redacted, I manually match each of these 2,645 loan packages to the corresponding loan contract from EDGAR. Loan contracts are attached to 8-K, 10-Q, or 10-K filings. I can match 83% of these contracts, leading to a sample of 2,204 loan contracts.¹⁶ Table 1 provides the details.

3.2 Redacted credit agreements

I classify credit agreements as being redacted if either of the following two scenarios applies. First, I classify contracts as being redacted if the firm asks the SEC for permission to withhold information from investors in its loan contract filings (*requests for confidential treatment*). Second, I classify contracts as being redacted if some or all fees charged by the lenders are detailed in a separate, undisclosed document or fee letter (*missing fee information*).

3.2.1 Requests for confidential treatment

In this first scenario, the firm asks the SEC for authorization to withhold information from investors in its material contract filings, presumably because the information is proprietary. Thus, I search debt contracts for the phrase “confidential treatment” or the word “redacted.”¹⁷ To ensure that the contract has been redacted, I read the relevant contract sections and classify contracts as *Confidential Treatment* if potentially material information has been redacted. These redacted agreements typically omit information about covenants, litigation, patents, or bank accounts. For my sample, I find that less than 1% of all contracts have requested SEC approval for confidential treatment.

Table 1 Sample Selection

	Loan packages on Dealscan with all variables	11,017
	Loan packages with all variables and a capital expenditure covenant	2,645
	Missing credit agreements	-441
The table presents the sample selection	Main Sample	2,204

¹⁴ I impose this requirement to ensure that Dealscan has accurately collected all relevant terms of the contract. Missing covenant information is often the result of data errors (Beatty et al. 2008).

¹⁵ Loan or deal packages are sets of loan facilities from the same lead lender to the same borrower. For example, a single loan package may include two separate facilities: a revolving line of credit and a term loan. Because all facilities in a loan package are usually subject to the same covenants, my analysis is at the package level.

¹⁶ In robustness tests, I also conduct an analysis when excluding loan amendments and find similar results.

¹⁷ Loan contracts often contain sections marked as “deleted,” “reserved,” or “intentionally deleted.” Conversations with practitioners suggest that these sections are unlikely to be redacted—contracting parties use them merely as placeholders when drafting the initial contract.

The loan agreement for Hexcel Corporation from July 9, 2010, provides an example of confidential information that has been omitted and filed with the SEC pursuant to a request for confidential treatment. Here are excerpts of the agreement, with ***** denoting information that has been redacted.

1. Hexcel Corporation's land located in Livermore, California, may be sold in one or a series of transactions.
2. Hexcel's land and facilities in [*****].
3. Unimproved land located in Lodi, New Jersey.
4. The land and manufacturing facility of [*****] in [*****].
5. Hexcel's equity interest in [*****].

3.2.2 Missing fee information

The second scenario in which I classify a contract as being redacted is when some or all of the fees charged by lenders are detailed in a separate, undisclosed document or fee letter. Lenders charge a variety of fees, which can be material. Some of these fees are paid at loan initiation (e.g., origination fees), while others are paid on a regular basis during the life of the contract (e.g., administrative agent fees, monitoring fees, and auditing fees). Moreover, there is some variation in how much fee information is disclosed. Some contracts detail all the relevant fees in a separate document, while others partially disclose fee information.

Below is an example that corresponds to excerpts from the credit agreement for Connetics Corporation from February 6, 2004. The contract suggests the existence of a side letter regarding certain lender fees that is not disclosed. Though this information might be material, the contract does not provide evidence that the borrower requested confidential treatment from the SEC.

2.8. FEES. Company agrees to pay to Agents such fees in the amounts and at the times separately agreed upon.

For my sample, I find that 72.5% of all contracts have missing fee information. In most cases, these contracts have not requested SEC approval for confidential treatment.

3.3 Which fees are redacted and how material are they?

To provide insights about which fees are redacted and how material they are, I searched for confidential fee letters; I was able to find seven of them.¹⁸ Table 2 provides a sum-

¹⁸ I found six of the letters by searching EDGAR using different keyword combinations that included "fee letter." A practitioner provided two additional letters obtained from bankruptcy proceedings. However, I use only one of them, the Iridium fee letter, for my analysis. I excluded a fee letter corresponding to United Air Lines, as the loan was backed by the US government, a setting that is not comparable to that of the loans in my sample.

	Annualized Redacted Fees	Redacted Fees Used in Calculation of Total Annualized Redacted Fees														Redacted Fees Not Used					
		Upfront	Back-End	Commitment	Unused Facility	Arrangement	Annual Agency	Diligence Deposit	Closing	Annual Servicing	Annual Audit	Amendment	Structuring	Refinancing	Origination	Annual Monitoring	Annual FLO Facility	Extension	Prepayment	Accordion	
EyePoint Pharmaceuticals	1.53%	1.50%	0%																		
Anthracite Capital	0.88%		0%	0.5%	0.6%																0.25%
GEE Group	0.36%	0.50%			0.50%	0.50%	0.125%	0.175%													
Grill Concepts	1.13%				0.50%				1.5%	0.45%	0.06%										0.3%
U.S.I. Holdings	2.00%											0.50%	0.50%	0.50%							
Frederick's of Hollywood	1.04%														0.75%	0.35%	0.5%				0.5-3%
Iridium	0.85%	1.13%		0.31%	0.75%	0.36%					0.02%										15%
Average	1.11%																				

Table 2 Redacted Fees

This table summarizes the redacted fees contained in seven confidential fee letters. All fees are expressed as a percentage of the deal amount. *Annualized Redacted Fees* provides an estimate of the annual expense impact of the redacted fees. The fees under “Redacted Fees Not Used” were not included in that calculation. Section 3.3 provides links to the confidential fee letters that are publicly available and a summary of the assumptions used to calculate *Annualized Redacted Fees*

mary of each of the redacted fees mentioned in the confidential fee letters.^{19,20} Moreover, using conservative assumptions, I calculated *Annualized Redacted Fees*, which estimates the annual impact on the income statement of the redacted fee expenses.²¹

The number of fees described in the confidential fee letters varies significantly, from two (EyePoint Pharmaceuticals) to six (Frederick’s of Hollywood). So does the fees’ magnitude: the annualized impact of those redacted fees on the income statement ranges from 0.36% (GEE Group) to 2.00% (U.S.I. Holdings) of the deal amount.

To assess the materiality of the redacted fees for my sample, I assume that the average *Annualized Redacted Fees* of 1.11% from Table 2 represents a reasonable estimate for the typical borrower with a fee side letter. This number is equivalent to 39.6% of the average *Loan Spread* of 2.80% (i.e., 280 basis points, as shown in

¹⁹ Here are links to the first six confidential fee letters (the Iridium fee letter is not publicly available):<https://www.sec.gov/Archives/edgar/data/1314102/000119312519044197/d686689dex102.htm>; <https://www.sec.gov/Archives/edgar/data/1050112/000134100408000427/ex10-2.htm>; https://www.sec.gov/Archives/edgar/data/40570/000147793221001697/job_ex102.htm; <https://www.sec.gov/Archives/edgar/data/895041/000133227706000104/ex10-2.txt>; <https://www.sec.gov/Archives/edgar/data/1102643/000102140803001978/dex102.htm>; https://www.sec.gov/Archives/edgar/data/93631/000114420141019851/v373309_ex10-2.htm;

²⁰ Fees expressed in dollar amounts were converted into percentages based on loan amount. Moreover, in the case of loan deals with multiple facilities, the percentages shown correspond to the weighted average.

²¹ To be conservative, I excluded, from the calculation, the impact (if applicable) of prepayment, extension, and accordion fees. Moreover, when the contract stipulated different options (e.g., regarding maturity of the loan), I used the more conservative one. Here is a summary of the assumptions used for each loan: EyePoint Pharmaceuticals: The upfront and back-end fees are amortized over 59 months, the maturity of the loan. I excluded the impact of the expense cap mentioned in the letter. Anthracite Capital: The commitment fee is amortized over one year, the maturity of the loan. The impact of the unused facilities fees (=4x0.15%) is calculated based on evidence, in Sufi (2009), that on average 62.5% of the facility is unused. GEE Group: The upfront, arrangement, and diligence deposit are amortized over five years, the maximum maturity of the loan. Grill Concepts: The closing fee is amortized over five years, the maturity of the loan. To calculate the closing, annual servicing, and audit fee percentages, I divided by \$8,000,000. The impact of the unused facilities fees is calculated based on evidence, in Sufi (2009), that on average 62.5% of the facility is unused. U.S.I. Holdings: Fees correspond to the eighth amendment to the credit agreement. Annualized fees are calculated based on evidence, in Roberts (2015), that the typical loan is renegotiated every nine months. Frederick’s of Hollywood: The origination fee is the weighted average of the corresponding facilities. It is amortized over three years. The impact of the unused facilities fees is calculated based on evidence, in Sufi (2009), that on average 62.5% of the facility is unused. Iridium: The upfront, commitment, and arrangement fees are amortized over 2.17 years, the average maturity of the facilities. To calculate the upfront fees, I used the lower estimate provided in the fee letter.

Table 3) of firms in my sample. Moreover, to compare the impact of the redacted fees to the firms' profitability (*ROA*), I calculate *Estimated Redacted Fees-to-Assets*. The redacted fees relative to total assets have a mean of 0.5% and a median of 0.4%. In terms of relevance relative to *ROA*, for the median firm with missing fees the absolute value of *Estimated Redacted Fees-to-Assets* of 0.4% represents almost 20% of the median *ROA* of 1.8% at loan initiation. As a result, the impact of the redacted fees is potentially material.

3.4 Monitoring-intensive covenants

To determine whether loans include covenants that require more intensive monitoring and to keep data collection manageable, I read each contract to determine how the capital expenditure covenant is designed. I classify capital expenditure covenants into *plain vanilla* and *monitoring-intensive* covenants. Plain vanilla covenants are those that stipulate the maximum amount that the borrower can invest during each year of the contract without including a state-contingent provision, a carryforward provision, or both (as detailed below). The capital expenditure restriction contained

Table 3 Descriptive Statistics – Main Sample

Variable	N	Mean	Median	Std Dev	25th Pctl	75th Pctl
<i>Redacted</i>	2,204	0.728	1.000	0.445	0.000	1.000
<i>Confidential Treatment</i>	2,204	0.009	0.000	0.095	0.000	0.000
<i>Missing Fee Information</i>	2,204	0.725	1.000	0.446	0.000	1.000
<i>Estimated Redacted Fees-to-Assets</i>	1,599	0.005	0.004	0.006	0.002	0.006
<i>Number of Covenants</i>	2,204	3.453	3.000	1.149	3.000	4.000
<i>Monitoring-Intensive Covenants</i>	2,204	0.466	0.000	0.499	0.000	1.000
<i>Industry-Adjusted Loan Spread</i>	2,204	0.000	-20.246	134.046	-87.306	52.106
<i>Loan Spread</i>	2,204	280.112	253.431	137.504	196.383	331.991
<i>Not Rated</i>	2,204	0.651	1.000	0.477	0.000	1.000
<i>Hindex</i>	2,204	1.497	1.000	1.132	0.000	3.000
<i>ROA</i>	2,204	-0.019	0.015	0.153	-0.044	0.054
<i>ROA Missing Fee Information</i>	1,599	-0.012	0.018	0.142	-0.036	0.055
<i>Firm Age</i>	2,204	16.890	12.000	13.296	7.000	23.000
<i>Size</i>	2,204	5.875	5.873	1.423	4.889	6.822
<i>Market-to-Book</i>	2,204	1.520	1.234	0.902	0.995	1.670
<i># Previous Deals</i>	2,204	4.735	4.000	3.538	2.000	7.000
<i>High Tech</i>	2,204	0.164	0.000	0.371	0.000	0.000
<i>Litigation Risk</i>	2,204	0.245	0.000	0.430	0.000	0.000
<i>Cash-Flow Volatility</i>	2,204	0.099	0.053	0.173	0.028	0.098
<i>Deal Amount (millions)</i>	2,204	232.809	100.000	345.617	40.000	275.000
<i>Deal Amount-to-Assets</i>	2,204	0.448	0.301	0.574	0.157	0.530
<i>Maturity (months)</i>	2,204	44.811	41.000	19.416	35.000	60.000

This table reports descriptive statistics for the variables used in the sample. Following previous research, I exclude financial firms (SIC codes 6000–6999) and utilities (SIC codes 4900–4999). I exclude firm-years with missing values for control variables. All variables are described in the appendix. All continuous variables are winsorized at the 1% level

in the July 15, 1999, credit agreement for Celebrity Inc. illustrates a plain vanilla capex covenant.

Capital Expenditures. Allow Borrowers, in the aggregate, [not] to make capital expenditures in any fiscal year in excess of \$2,000,000.

Monitoring-intensive covenants are those that include a capital expenditure state-contingent provision that conditions the amount of allowable investments on the borrower's performance, a carryforward provision that allows the borrower to roll over unused capital expenditure amounts, or both.²² The restriction in the May 5, 2008, credit agreement for Apac Customer Services Inc. illustrates a state-contingent provision.

Capital Expenditures. Contract for, purchase or make any expenditure or commitments for Capital Expenditures in any fiscal year in an aggregate amount in excess of (a) \$6,800,000 for the fiscal year ending on or about December 31, 2008 and (b) for each fiscal year thereafter an amount not to exceed sixty-five percent (65%) of Borrower's EBITDA for the prior fiscal year.

In addition, the restriction in the November 5, 1999, credit agreement for Sleepmaster LLC illustrates a carryforward provision.

Consolidated Capital Expenditures. The Parent will not, nor will it permit any Subsidiary to permit Consolidated Capital Expenditures as of the end of any fiscal year of the Parent to exceed \$6,000,000 for all such persons in the aggregate during such fiscal year; provided, however, that 50% of any amounts not utilized during any fiscal year may be carried forward to the immediately following fiscal year only.

I expect that these types of monitoring-intensive covenants require extra monitoring by lenders for two reasons. First, lenders might expend more effort in designing and keeping track of contracts with those covenants. Second, because those covenants are more complex, they are more likely to lead to future renegotiation, requiring additional effort by lenders. For example, in the case of the state-contingent provision in the loan contract with Apac Customer Services (shown above), lenders must monitor how the borrower's EBITDA relates to its capital expenditures. Christensen and Nikolaev (2012) provide evidence that covenants tied to performance metrics such as EBITDA are more likely to lead to future renegotiations and thus additional lender effort.

²² On rare occasions, contracts classified as having a carryforward provision allow the borrower to spend in excess of the maximum allowed amount in a given year by reducing permitted capital expenditures in the immediately following year by the amount of such excess.

3.5 Summary statistics

Table 3 presents descriptive statistics for the variables in this study. Almost 73% of the contracts have been redacted. However, less than 1% of the loans disclose that the firm requested confidential treatment from the SEC. This finding suggests that firms may not always follow the SEC's confidential treatment protocols. *Number of Covenants* has a mean value of 3.45. *Monitoring-Intensive Covenants* has a mean value of 0.47, suggesting that close to 50% of the observations in my sample have a capital expenditure covenant that requires more detailed monitoring of the borrower. Industry-adjusted loan spreads have, by definition, a mean of zero. *Not Rated* has a mean value of 0.65, suggesting that most borrowers do not have a credit rating. In addition, I find that mean *ROA* is negative. Moreover, 16.4% of the observations pertain to firms in high-tech industries, and 24.5% to firms in industries more exposed to litigation risk. Finally, *Deal Amount-to-Assets* has a mean value of 0.45, suggesting that the loans play an important role in the capital structure of firms in the sample.

4 Empirical analysis

4.1 Econometric specification

As mentioned earlier, I expect that lenders that invest more in monitoring are more likely to require that potentially material information be redacted. I also expect that when borrowers are credit-constrained, they are more likely to withhold potentially material information from the agreement. I estimate the following specification:²³

$$\text{Redacted} = \beta_0 + \beta_1 \text{NondisclosureIncentives} + \beta_2 \text{Controls} + \vartheta \quad (1)$$

Here, the outcome variable of interest is *Redacted*, which is a dummy for whether the borrower has requested confidential treatment of certain information from the SEC or the agreement does not disclose all fee information. To proxy for the lenders' incentives to redact information, I use either the *Number of Covenants* or *Monitoring-Intensive Covenants*. My prediction is that, in those cases, $\beta_1 > 0$, suggesting that when lenders invest more in monitoring the borrower, the agreement is more likely to be redacted.

To proxy for the borrowers' incentives to redact information, I use either *Industry-Adjusted Loan Spread*, which is equal to the loan spread charged to the borrower in excess of the loan spread charged to peers in the same Fama-French 48-industry classification, or *Not Rated*. My prediction is that, in those cases, $\beta_1 > 0$, suggesting that when borrowers are more credit-constrained, the agreement is more likely to be redacted.

I include controls for a number of firm characteristics that might affect the redaction of credit agreements, following Verrecchia and Weber (2006). One is the level

²³ Consistent with the suggestion of Angrist and Pischke (2009), I use a linear probability model as opposed to a nonlinear limited-dependent-variable model. This allows for easy interpretation of the coefficients.

of competitiveness in a firm's product market. The theoretical literature offers conflicting arguments as to how competition would affect the firm's decision to disclose proprietary information. Darrough and Stoughton (1990) argue that greater competition fosters greater disclosure as a device to thwart entry into a product market. Alternatively, Verrecchia (1990) argues that greater competition inhibits disclosure in markets composed of mature competitors (i.e., post-entry). The conflicting theoretical predictions suggest that it is unclear how competition affects a firm's decision to redact material contract information. To proxy for product-market competition, I use *Hindex*, which is the rank of the industry's Herfindahl index. This index is calculated as the sum of the squared market share of each publicly traded company in a particular two-digit SIC code. Market share is calculated as the sales of a particular company divided by the total sales of the SIC code.

Another control variable I use is profitability. Lang and Lundholm (1993) argue that it is unclear how firm performance affects the decision to disclose. Profitable firms may choose not to disclose because disclosure encourages entrance and competition. Or, if there are costs to disclosure, then more-profitable firms have stronger incentives to disclose and reduce costs that result from adverse selection. Thus, it is unclear whether profitability is positively or negatively associated with the extent of disclosure. I define *ROA* as net income divided by total assets.

I also include firm age as a control variable that might affect credit-agreement redaction. However, the effect could go in either direction. On one hand, younger firms have incentives to reduce disclosure about proprietary information. On the other hand, these firms also have incentives to increase disclosure to access capital. *Firm Age* is the number of years that the firm has been in the Compustat database. I also control for firm size and growth opportunities, which might affect disclosures. *Size* is calculated as the natural logarithm of total assets. I proxy for growth opportunities using the *Market-to-Book* ratio, which is the ratio of the market value of equity plus the book value of liabilities to the book value of assets. I also control for the number of previous deals that the borrower closed with members of the syndicated loan market. Firms accessing the syndicated loan market multiple times are better known to banks (Sufi 2007; Saavedra 2018), and this could affect incentives to redact information. I calculate *# Previous Loans* at the Dealscan level.

I also control for borrowers operating in high-tech industries. These firms might have higher incentives not to redact credit agreements to finance future projects. Or, they might want to redact information to keep competitors in the dark. Following Brown et al. (2009), *High Tech* is a dummy equal to one if the borrower is in a high-tech industry (SIC codes 283, 357, 366, 367, 382, 384, and 737), zero otherwise.

Also, I expect that firms in industries more exposed to litigation are more likely to hide information to prevent potential litigation. Following Kim and Skinner (2012), *Litigation Risk* is a dummy equal to one if the borrower is in the biotech (SIC codes 2833–2836 and 8731–8734), computer (3570–3577 and 7370–7374), electronics (3600–3674), or retail (5200–5961) industry, zero otherwise.

I also control for the firm's business uncertainty or volatility (Saavedra 2019). *Cash Flow Volatility* is equal to the volatility of cash flows scaled by mean noncash assets over the previous five years. And I control for the size of the loan provided to the borrower. When the loan is larger, lenders might have stronger incentives for

the borrower not to disclose material information. *Deal Amount* is equal to the size of the loan deal and is measured in millions of US dollars. Finally, I control for the length of the loan. Lenders might have higher incentives to protect profits when the maturity of the loan is longer. *Maturity* is equal to the weighted average loan maturity in a loan deal.

All variables used in this study are described in the appendix.²⁴ I winsorize all continuous control variables at the 1% and 99% levels to limit the influence of outliers. I cluster standard errors at the firm level. Finally, to ease the interpretation of the results, I standardize all continuous variables to have a mean of zero and a standard deviation of one.

4.2 Results

Table 4 provides the results when estimating Eq. 1 regarding the lender incentives to withhold information. In column 1, the coefficient on *Number of Covenants* is positive (0.049) and statistically significant (t-stat=4.85). This coefficient suggests that a one-standard-deviation increase in the number of covenants increases the probability of withholding potentially material information from the credit agreement by 4.9% points. In column 2, the coefficient on *Monitoring-Intensive Covenants* is positive (0.127) and statistically significant (t-stat=6.03). This coefficient suggests that contracts with covenants that require lenders to do more monitoring are 12.7% more likely to be redacted. This evidence from Table 4 is consistent with the notion that when lenders invest more in monitoring, contracts will be more likely to withhold information to give those lenders an information advantage.

With respect to the control variables, I find evidence that larger firms and firms in industries with high litigation risk are more likely to have redacted credit agreements. Firms exposed to high litigation risk might want to restrict access to information that could increase that risk. I also find evidence that contracts with larger deal amounts and longer maturities are more likely to be redacted. This result is consistent with lenders having stronger incentives to protect private information when the size of the loan is bigger and the contract is longer.

Table 5 provides the results when estimating Eq. 1 regarding the borrower incentives to withhold information. In column 1, the coefficient on *Industry Adjusted Loan Spreads* is positive (0.025) and statistically significant (t-stat=2.73). This coefficient suggests that a one-standard-deviation increase in industry-adjusted spreads increases the probability of withholding potentially material information from the credit agreement by 2.5% points. In column 2, the coefficient on *Not Rated* is positive (0.067) and statistically significant (t-stat=2.97). This coefficient suggests that contracts with unrated borrowers are 6.7% more likely to be redacted. The evidence from Table 5 suggests that when borrowers are more credit-constrained, contracts are more likely to withhold information to avoid sending negative signals to the market.

²⁴ To ensure that I use only accounting information that is publicly available at the time of a loan, I employ the following procedure: For deal packages made in calendar year t , if the deal-activation date is four months or more after the fiscal-year-ending month in calendar year t , I use the data of that fiscal year. If the deal-activation date is less than four months after the fiscal-year-ending month, I use the data from the fiscal year ending in calendar year $t-1$.

Table 4 Lender Incentives and Redacted Credit Agreements

<i>Dependent Variable =</i>	<i>Redacted</i> (1)	<i>Redacted</i> (2)
Number of Covenants	0.049*** (4.85)	
Monitoring-Intensive Covenants		0.127*** (6.03)
Hindex	0.006 (0.58)	0.002 (0.23)
ROA	0.003 (0.31)	0.001 (0.14)
Firm Age	-0.001 (-0.11)	-0.001 (-0.17)
Size	0.049*** (3.08)	0.030* (1.94)
Market-to-Book	0.007 (0.76)	0.005 (0.49)
Log (1+ #Previous Deals)	0.015 (1.42)	0.017 (1.54)
High Tech	-0.009 (-0.30)	-0.006 (-0.19)
Litigation Risk	0.065*** (2.82)	0.051** (2.20)
Cash-Flow Volatility	-0.004 (-0.54)	-0.007 (-0.89)
Log (Deal Amount)	0.130*** (7.65)	0.134*** (8.05)
Maturity	0.063*** (5.74)	0.057*** (5.08)
<i>Clustering</i>	Firm	Firm
<i>N</i>	2,204	2,204
<i>R-Squared</i>	0.281	0.286

This table investigates whether lender monitoring affects the redaction of debt contracts. I standardize all continuous variables to have a mean of zero and a standard deviation of one. Following previous research, I exclude financial firms (SIC codes 6000–6999) and utilities (SIC codes 4900–4999). I exclude firm-years with missing values for control variables. All variables are described in the appendix. All continuous variables are winsorized at the 1% level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, two-tailed, respectively

This evidence is consistent with the notion that when borrowers are more likely to be charged higher fees, they will avoid disclosing those fees.

5 Additional tests

5.1 Lender motivation for requesting redaction

As previously discussed, lenders might want to withhold information from credit agreements because they do not want other borrowers to find out about contract

Table 5 Borrower Incentives and Redacted Credit Agreements

<i>Dependent Variable =</i>	<i>Redacted</i> <i>(1)</i>	<i>Redacted</i> <i>(2)</i>
Industry-Adjusted Loan Spread	0.025*** (2.73)	
Not Rated		0.067*** (2.97)
Hindex	0.002 (0.23)	0.002 (0.21)
ROA	0.007 (0.73)	0.000 (0.01)
Firm Age	-0.000 (-0.05)	-0.001 (-0.14)
Size	0.034** (2.21)	0.052*** (3.12)
Market-to-Book	0.007 (0.73)	0.005 (0.49)
Log (1+ # Previous Deals)	0.015 (1.40)	0.021** (1.97)
High Tech	-0.010 (-0.32)	-0.011 (-0.35)
Litigation Risk	0.058** (2.48)	0.058** (2.45)
Cash-Flow Volatility	-0.006 (-0.66)	-0.004 (-0.46)
Log (Deal Amount)	0.156*** (9.62)	0.154*** (9.45)
Maturity	0.075*** (6.91)	0.074*** (6.80)
<i>Clustering</i>	Firm	Firm
<i>N</i>	2,204	2,204
<i>R-Squared</i>	0.274	0.274

This table investigates whether credit constraints affect the redaction of debt contracts. I standardize all continuous variables to have a mean of zero and a standard deviation of one. Following previous research, I exclude financial firms (SIC codes 6000–6999) and utilities (SIC codes 4900–4999). I exclude firm-years with missing values for control variables. All variables are described in the appendix. All continuous variables are winsorized at the 1% level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, two-tailed, respectively

terms, which could lead to lower profitability. Alternatively, lenders might seek an information advantage to hold up the borrower by making it more difficult for outside lenders to compete for that borrower's loans (Rajan 1992).

To provide insights into which motivation prevails, I investigate future loan-related outcomes. If banks request redaction to gain an information advantage to hold up the borrower, I would expect that redacted credit agreements relate to incumbent lenders arranging the next loan *and* charging higher future rates. All other scenarios would be more consistent with lenders requesting the redaction of potentially material information in order to hide this information from their other borrowers.

I investigate whether redacting credit agreements increases the chances that incumbent lenders arrange the next loan and charge higher rates by employing the following regression framework:

$$FutureOutcome = \beta_0 + \beta_1 Redacted + \beta_2 Controls + \vartheta \quad (2)$$

Future Outcome is one of the following three variables. *Same Lender* is a dummy variable equal to one if the borrower's next loan is issued by the current lead loan arranger, zero otherwise. *Future Loan Spread* is equal to the natural logarithm of the loan spread of the borrower's next loan. *Difference Loan Spread* is equal to natural logarithm of the difference between the future loan spread and the current loan spread. Controls include the number of lenders on the loan, interest rate (only in the case of *Same Lender*), loan amount, maturity, number of financial covenants in the loan package, and year fixed effects. All controls are contemporaneous with the new loan being issued.

Table 6 presents the results. My findings suggest that borrowers with redacted credit agreements are more likely to issue the next loan with the current lead arranger. However, there is little evidence that the redaction increases the cost of future loans, suggesting that it is unlikely that lenders' motivation for withholding potentially material information from credit agreements relates to holding up the borrower. The evidence suggests, rather, that there is an equilibrium outcome where lenders benefit from the redaction because potentially relevant information is invisible to their other borrowers. In exchange, borrowers benefit from the increased bank monitoring and the continuation of the relationship when issuing their next loan.

5.2 Does the Refinitiv / LPC Dealscan database correctly code missing fee information?

An open question is whether LPC Dealscan correctly codes missing fee information. One possibility is that banks provide all of their data in a machine readable format

Table 6 Future Outcomes

Dependent Variable =	<i>Same Lender</i>	<i>Future Loan Spread</i>	<i>Difference Loan Spread</i>
	(1)	(2)	(3)
Redacted	0.074** (2.42)	0.034 (0.94)	-0.012 (-0.37)
Controls	Yes	Yes	Yes
Clustering	Firm	Firm	Firm
<i>N</i>	1,420	1,420	1,420
<i>R-Squared</i>	0.093	0.091	0.107

This table investigates whether withholding information increases incumbent lenders' chances of arranging a borrower's next loan and charging higher future loan spreads. The sample is limited to observations that issue a future loan. I exclude observations with missing values for control variables. All variables are described in the appendix. All continuous variables are winsorized at the 1% level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, two-tailed, respectively.

to LPC, and the SEC filing is not the sole source document for LPC. Alternatively, if LPC is relying on the filing, then they are missing this data and coding, for example, the *All-in-Drawn Spread* with a bias. To answer this question, I randomly selected 200 contracts with missing fee information and manually checked differences in fee data between the SEC filing and the LPC database for each contract.²⁵

I classify fee data in a credit agreement as being incorrectly coded in Dealscan if Dealscan (1) only records the fees disclosed in the agreement (despite the existence of a confidential fee letter with additional fees), or (2) is missing data on the fee types that the agreement explicitly indicates are contained in the separate fee letter.²⁶

I find that 98.5% (197 out of 200) of the agreements have fee data incorrectly coded in Dealscan. Only 1.5% (three out of 200) of the contracts contain fee information in Dealscan beyond what is disclosed in the contract. As a result, Dealscan likely coded fee data for only these three contracts correctly.²⁷ Given that lenders often report all of their syndicated loan underwriting activities to the data provider (Bird et al. 2019), the fact that they do not pass the fee data along for most contracts further confirms the lenders' incentives to hide this information. Moreover, the evidence suggests that the fee data on Dealscan is incomplete, thus leading to potential biases when it is included in cost of capital measures.

5.3 Other information redacted from credit agreements

Next, I investigate which other information is omitted from credit agreements without the contract disclosing that this information has been omitted. To provide insights, I scrutinize 100 randomly selected debt agreements and classify what information is missing. When reading the different sections of each contract, I take note of exhibits and schedules that are not disclosed. For instance, debt contracts often have sections that discuss (among other things) how loan shares are allocated to lenders of the loan syndicate and what the collateral of the loan is. These sections then refer to exhibits or schedules that provide this information. However, not all contracts have those exhibits and schedules attached. Others have those attachments, but they are blank. In these cases, I classify the contract as missing information regarding that topic.

Table 7 presents the results. I find that 20% of the contracts are missing information about contract terms, such as the shares assigned to each member of the loan syndicate. Further, 29% of the contracts are missing exhibits and schedules related to compliance, which can include how particular covenant thresholds should be calculated; 62% are missing information about loan collateral, including how the borrowing base is calculated and what assets are collateralized; 29% and 38% are missing investment and litigation information, respectively. Finally, 69% have redacted company infor-

²⁵ To ease comparisons, I only included contracts with a single credit facility.

²⁶ None of the contracts that I reviewed provides a full list of all redacted fees. However, contracts often mention one or two types of fees that have been redacted (among other non-mentioned fee types). Examples of often-mentioned redacted fee types are the agency fee, amendment fee, closing fee, commitment fee, arrangement fee, structuring fee, and administrative fee.

²⁷ Given that the fee letter is confidential, I cannot establish that, in those three contracts, Dealscan correctly coded all the fees contained in the letter.

Table 7 Other Redacted Information

Loan Terms	Compliance	Collateral	Investments	Litigation	Company Info.
20%	29%	62%	29%	38%	69%

This table displays the percentage of credit agreements that have other types of information redacted. This information is based on a random sample of 100 debt agreements

Table 8 Robustness Test

	<i>Dependent Variable =</i>	<i>Redacted</i>
	Number of Covenants	0.045*** (4.38)
	Monitoring-Intensive Covenants	0.128*** (6.09)
	Industry-Adjusted Loan Spread	0.016* (1.66)
	Not Rated	0.085*** (3.93)
	All Controls	Yes
	Clustering	Firm
	<i>N</i>	2,204
	<i>R-Squared</i>	0.300

This table provides a robustness test including all main explanatory variables. All variables are described in the appendix. All continuous variables are winsorized at the 1% level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, two-tailed, respectively

mation, including labor disputes, environmental violations, taxes, employee plans, debt, intellectual property, and related-party transactions.

Finally, it is worth noting that some omitted exhibits and schedules might be more relevant to interested parties than others. For instance, detailed information about loan collateral (e.g., the specific formula showing how the borrowing base is calculated) might be important in cases where the firm faces liquidity needs. Missing information about specific lender shares might be less relevant.

5.4 Robustness test including all explanatory variables

To provide evidence that the variables used to test my predictions do not simply capture the same construct, I conduct a robustness test by including all explanatory variables in the same regression. Table 8 presents the results including all variables capturing lender and borrower incentives. The results continue to be significant for all variables.

6 Conclusion

I examine whether firms follow the Securities and Exchange Commission's confidential treatment protocols when redacting potentially material information from their credit agreements. My findings suggest that most firms may withhold potentially material information without submitting a request for confidential treatment to the SEC and without making interested parties aware of their information disadvantage.

I also find evidence consistent with the notion that lender and borrower incentives drive the decision to withhold potentially material information from the credit agreement. Finally, my findings are consistent with the notion that lenders influence redaction decisions not out of concern about rivals but because they do not want their other borrowers to see the terms.

My study contributes to the literature by providing new insights into noncompliance with SEC directives. My findings suggest that firms often may not follow the SEC's confidential treatment protocols when redacting potentially material information from their credit agreements. For example, firms infrequently submit confidential treatment requests to redact fee information, although such information reflects a key component of the cost of debt. Though my paper focuses on debt contracts, my findings might indicate how firms redact information from other material contracts as well. Moreover, future research could provide evidence on whether contracting parties with access to the redacted information trade on it.

This paper also contributes to the literature showing that lender incentives influence mandatory disclosures. Although lenders are a major source of financing to corporations, little is known about whether and how they shape mandatory corporate disclosures. By providing evidence that lenders help shape disclosures in the credit agreement, my findings add new insights to a larger literature that investigates the determinants and consequences of disclosures. (See Leuz and Wysocki (2016), Roychowdhury et al. (2019), and Blankespoor et al. (2020) for recent reviews.) Finally, my finding that the Refinitiv / LPC Dealscan database rarely includes redacted fee data suggests that this database may have biased data, thus potentially affecting analyses that include fees in cost of debt computations.

Appendix: variable definitions

Redacted: Dummy equal to one if the credit agreement has been redacted, zero otherwise.

Confidential Treatment: Dummy equal to one if the credit agreement has been redacted with SEC authorization, zero otherwise.

Missing Fee Information: Dummy equal to one if the contract mentions that fee information is detailed in a separate document, zero otherwise.

Est. Redacted Fees-to-Assets: Equal to the average annualized redacted fees of 1.11% (Table 2) times the deal amount divided by total assets.

Number of Covenants: Total number of covenants included in the contract.

Monitoring-Int. Covenants: Equal to one if the covenant package includes a capital expenditure carryforward or rollover provision or if capital expenditures are linked to the current performance or financial condition of the borrower, zero otherwise.

Industry-Adj. Loan Spread: The loan spread charged to the borrower in excess of the loan spread charged to other borrowers in the same Fama-French 48-industry classification.

Loan Spread: The weighted loan spread of the deal package.

Not Rated: Equal to one if the firm has no S&P rating, zero otherwise.

Hindex: The rank of the industry's Herfindahl index. This index is calculated as the sum of the squared market share of each publicly traded company in a particular two-digit SIC code. Market share is calculated as the sales of a particular company divided by the total sales of the SIC code.

ROA: Net income divided by total assets.

ROA Missing Fee Info.: Net income divided by total assets, calculated for contracts that mention that fee information is detailed in a separate document.

Firm Age: Number of years in the Compustat database.

Size: The natural logarithm of total assets.

Market-to-Book: The book value of total assets minus the book value of equity plus the market value of equity as the numerator of the ratio and the book value of assets as the denominator.

#Previous Deals: Equal to the number of previous loans issued by the borrower.

High Tech: Dummy equal to one if the borrower is in a high-tech industry (SIC codes 283, 357, 366, 367, 382, 384, and 737), zero otherwise.

Litigation Risk: Dummy equal to one if the borrower is in the biotech (SIC codes 2833–2836 and 8731–8734), computer (3570–3577 and 7370–7374), electronics (3600–3674), or retail (5200–5961) industry, zero otherwise.

Cash-Flow Volatility: The volatility of pretax cash flows scaled by mean noncash assets over the previous five years.

Deal Amount: The deal amount, measured in millions of dollars.

Deal Amount-to-Assets: The deal amount divided by total assets.

Maturity: The weighted maturity of all facilities in the loan, measured in months.

Same Lender: Equal to one if the borrower's next loan is issued by the current lead loan arranger, zero otherwise.

Future Loan Spread: Natural logarithm of the loan spread of the borrower's next loan.

Difference Loan Spread: Natural logarithm of the difference between the future loan spread and the current loan spread.

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