

Lenders' Liability Recognition Preference: Evidence from Lease Accounting

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ABSTRACT

We examine lenders' preferred liability recognition criteria in the lease accounting setting. Among 7,058 debt contracts filed to the SEC from 2014-2020, 86 percent of the contracts mention leases and 71 percent mention off-balance-sheet leases. Surprisingly, only 27 percent of the contracts request to include the off-balance-sheet long-term leases in the liability definition. After exploiting more than thirty factors, one specific condition associated with the decision to include *all* long-term leases in liability stands out. As more *other* borrower clients received SEC's Accounting and Auditing Enforcement Releases, restated financial reports due to fraudulent activities, or reported SOX's 404 internal control weakness due to accounting fraud, a lender is more likely to bring off-balance-sheet leases back to the liability definition. These findings suggest that lenders' first priority in designing contracts is unlikely to optimize accounting choices. However, when lenders experience negative consequences of accounting-related fraud from other borrower clients, they reconsider their calculation by moving accounting choices to a higher priority.

Keywords: off-balance-sheet transactions, operating lease, synthetic lease, AAER, SOX 404 internal control weakness, restatement, ASC 842, IFRS 16, accounting standard, debt contracting.

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1. INTRODUCTION

Demski's (1973) seminal work on the impossibility of accounting standards in optimizing an individual user's decisions still proves true in today's business environment. Evaluating different accounting alternatives without specifying a particular user's preference is impossible. Motivated by this notion, our study focuses on one specific group of financial statement users—lenders, i.e., who supply capital to the reporting entity using fixed-income instruments. Based on 7,058 debt contracts filed to the SEC from 2014-2020, we can infer lenders' accounting preferences. Such empirical exercise complements standard setters' solicitations of comment letters and laboratory experimental evidence.

Fixed-income security provides a predetermined stream of future payments, so lenders are concerned about the downside risk of not receiving these payments from borrowers. For example, indebtedness (i.e., restrictions on additional borrowings) and maximum leverage ratio are the two common negative covenants in debt contracts (only 10 percent of 7,058 debt contracts have neither covenants.) Lenders rely on accountants' reports (especially regarding liability) to ensure borrower's payment ability. Motivated by lenders' concern about extensive borrowings, we examine lenders' preferred liability recognition criteria. Recognition criteria determine when and how a business transaction is reported in the financial statement (FASB's Statement of Financial Accounting Concepts No. 5). Liability refers to "probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events" (SFAC 6). The legal case of *GSP Fin. LLC v. KPMG LLP* (2015 N.Y. Slip Op. 30975) provides an example of negative consequences to lenders when accountants fail to report *all* the borrower's liabilities.

There are essentially infinite recognition alternatives for various liability-related transactions, so we focus on one specific recognition choice—whether to include all long-term

leases in the balance sheet. Lease accounting is one of the longest-debated accounting standards in history (see a timeline from 1949-2013 for FASB and IASB standards in Table 1 of Dye, Glover, and Sunder 2015). In addition, long-term leases are well-known off-balance-sheet transactions among lenders (APB 38, 1949; Leftwich 1983). Our study aims to document how often lenders include all long-term leases in the liability definition, compared to leaving some leases out. More importantly, we attempt to identify the condition under which lenders prefer one accounting alternative over the other. Lastly, we relax the homogeneity assumption and present a cross-sectional analysis concerning lenders' or borrowers' characteristics.

Archival data of existing debt contracting studies are often restricted to DealScan's coverage, so we first provide summary statistics on the overall sample of 7,058 debt contracts by 3,151 distinct borrowers. About 86 percent of the contracts mention leases, and 71 percent mention off-balance-sheet leases (e.g., operating or synthetic leases), suggesting that most lenders are aware of off-balance-sheet lease transactions. Surprisingly, only 27 percent of the contracts request to include these off-balance-sheet long-term leases in the liability definition (for the indebtedness or maximum leverage ratio covenant).¹ The observation leads us to examine our second research question: *Why* do one-quarter of the contracts choose to include all leases in liability, but three-quarters do not?

To understand the condition under which one accounting alternative is chosen over the other, we merge our contract sample with DealScan and Compustat to obtain lenders' and borrowers' characteristics. We lost 3,643 contracts due to a lack of DealScan coverage and further lost 278 contracts due to a lack of Compustat coverage. The post-merged sample of 3,137 contracts by 1,529 distinct borrowers and 406 distinct lead lenders has significantly larger deal sizes and longer outstanding days than the pre-merged sample. The mean value of our primary variable of

¹ Gordon, Wang, and Zhao (2023) find that fewer than 10 percent of the 818 DealScan loan contracts they reviewed request to include off-balance-sheet leases in liability.

interest, whether including all long-term leases in liability, increases from 27 percent in the pre-merged sample to 36 percent in the post-merged sample.

After exploiting more than thirty factors, one specific condition associated with the decision to include all long-term leases in liability stands out. As more *other* borrower clients received SEC's Accounting and Auditing Enforcement Releases (AAER), restated financial reports due to fraudulent activities, or reported SOX's 404 internal control weakness due to accounting fraud, a lender is more likely to bring off-balance-sheet leases back to the liability definition. In a placebo test, we do not find significant associations when more other borrower clients defaulted on their debts, restated financial reports due to clerical errors, or reported SOX's 404 internal control weakness due to clerical errors. These findings suggest that lenders may not be concerned about omitted liabilities from their borrowers until they experience damages due to accounting fraud. We further find that the positive association between the decision to include all leases in liability and lenders' accounting fraud experience is more pronounced when the borrower has more off-balance-sheet leases or the contract includes more negative financial covenants. The association is weaker in secured debts or when the lender and borrower have a long-term relationship, suggesting that physical collaterals and relationship lending could substitute for (liability) monitoring efforts (Sufi 2007).

During our sample period of 2014-2020, the new lease accounting standards, ASC 842 and IFRS 16, were announced in 2016 and became effective in 2019. In addition to documenting lenders' preferences, we examine how much the new standard affects lenders' choices. Surprisingly, lenders are *less likely* to include all long-term leases in liability after the new standards are released. Furthermore, 40 percent of 7,058 debt contracts choose *not* to adopt the new standard (i.e., frozen GAAP). Lastly, we find *insignificant* associations between the frozen GAAP clause and lenders' accounting fraud experience (i.e., other borrower clients received

AAER, restated financial reports due to fraud, or reported SOX's 404 ICW due to fraud.) The high frequency of the frozen GAAP adoption is consistent with FASB's solicited surveys and comment letters from lenders. In the basis for conclusions of ASC 842 (ASU-2016-02 Section C Paragraph 14), FASB mentioned that a significant portion of credit agreements contain frozen or semi-frozen GAAP clauses. However, adopting such a clause seems to be a distinct decision from our focus on the liability recognition criteria lenders prefer.²

Taking both pieces of results together, we infer that lenders generally do not prioritize accounting choices. For example, the American Bankers Association submitted an opposing comment letter to FASB's revised exposure draft in 2013, claiming significant implementation costs related to restructuring the internal information system and, more importantly, changing the debt contracts with borrowers. The Mortgage Bankers Association's comment letter echoed a similar complaint. The Commercial Financial Association presented that 15 out of the 23 surveyed members did not support the new lease accounting standard proposal that require bringing off-balance-sheet leases back to the balance sheet. These anecdotes are consistent with only one-quarter of our sample contracts incorporating all long-term leases in the definition of liability. Our study further documents that including all long-term leases in liability is significantly associated with lenders' accounting fraud experiences. Like Warren Buffett said, "*Only when the tide goes out do you discover who's been swimming naked.*"

Our study relates to three streams of literature: theories on recognition criteria, the use of accounting in debt contracting, and lease accounting. Theories often use lease accounting as an example to motivate their investigation on recognition criteria in part due to similarities between lease accounting standard institutional features and the model assumptions (Demski 1973; Dye

² The correlation between the decision to adopt the new lease accounting standard ASC 842 and the choice of including off-balance-sheet leases in the liability definition is -0.28 in our sample of 7,058 debt contracts, suggesting different motivations could drive the two decisions. The two distinct decisions could lead to opposite inferences about the usefulness of accounting choices.

2002; Dye, Glover, and Sunder 2015; Gao and Jiang 2020). Our results contribute to the recognition criteria literature concerning lenders by identifying a specific condition under which lenders prioritize accounting choices. Put differently, lenders' first priority in designing contracts is unlikely to optimize accounting choices. However, when lenders experience negative consequences of accounting-related fraud from their borrower clients, they reconsider their calculation by moving accounting choices to a higher priority.

Our paper is closely related to studies that examine lease accounting in debt contracts. Bratten, Choudhary, and Schipper (2013), Altamuro, Johnston, Pandit, and Zhang (2014), and Gordon, Wang, and Zhao (2023) examine the ability of accounting metrics with or without adjusting for off-balance-sheet operating leases to explain variations in loan interest rates and credit ratings. Cheng, Jagg, Yan, and Young (2022) examine the frozen GAAP clause with respect to ASC 842, and Beckman and Kale (2023) compare the as-if recognized operating leases between the S&P valuation formulae and the post-ASC 842 financial statement disclosures. Our paper complements the existing studies by focusing on the "recognition" criteria lenders prefer. Although prior studies (Frankel, Seethamraju, and Zach 2008; Demerjian 2011; Li 2016; Demerjian, Donovan, and Larson 2016; Christensen and Nikolaev 2017; Cheng et al. 2022; Gordon et al. 2023) and FASB's surveys have acknowledged that lenders do not prioritize accounting choices or do not adopt the new (lease) accounting standards, our paper identifies a situation under which lenders *do* care about accounting recognition criteria alternatives—when they experience accounting-related fraud from other borrower clients.

The paper proceeds as follows. Section 2 discusses the institutional background of lease accounting standards and existing studies. Section 3 introduces our sample and empirical strategy, while Section 4 presents our results. Section 5 concludes the study.

2. INSTITUTIONAL BACKGROUND AND RELATED LITERATURE

We first discuss the history of lease accounting standards and then summarize related studies in three streams of literature: recognition criteria, the use of accounting in debt contracting, and lease accounting.

2.1 The Institutional Background of Lease Accounting Standards

One of the accountants' roles is periodically reporting an entity's financial status to external stakeholders, including lenders (Paton 1922; SFAC 8). For over a hundred years, accountants have continuously debated when and how a business transaction enters the entity's financial statements; for example, when to recognize a lease as an asset and a liability in the balance sheet (see Liang 2001 for a review). A long-term lease is a well-known means of financing³ but is often not reported by accountants as a liability in the balance sheet under the old lease accounting standard, ASC 840 and IAS 17. After World War II in 1949, the American Institute of Accountants (AICPA) issued Accounting Research Bulletin No. 38, requiring lessees to disclose long-term lease commitments in their financial statements due to the popular use of leases for financing. Such a requirement is partly motivated by lenders' demand because any missing liabilities from the balance sheet could potentially lower their likelihood of receiving the promised amount from the debtors. For example, in the case of *GSP Fin. LLC v. KPMG LLP* (2015 N.Y. Slip Op. 30975), the lender (GSP) sued the borrower's auditor (KPMG) for not informing the exclusion of capital leases from total debts when total debt and capital lease are both negative covenants in the debt contract with Hicks Sports. If GSP had known about Hicks violating these negative covenants, GSP would have taken necessary actions to rescue its payments from Hicks.⁴

³ Studies examining the decision to buy or lease are, for example, Eisfeldt and Rampini (2009), Beatty, Liao, and Weber (2010), Rampini and Viswanathan (2013), and Caskey and Ozel (2019).

⁴ Bankruptcy courts distinguish leases from secured borrowings based on the bright-line approach, e.g., close to 100 percent of the estimated economic life or the leased asset's fair value. A lease payment has seniority over debts because the lessor owns the leased asset. If a lease is a disguised secured loan, the owed lease payment is entitled up to the collateral value and will be negotiated along with other debts. See an example of *In re Price* (United States Bankruptcy

After a series of lease disclosure requirements, the Accounting Principles Board finally announced the lease recognition requirement, Financial Accounting Standard No. 13, effective in 1977, with only one board member dissenting due to objections about capital lease sub-categories. FAS 13 requires a capital lease to be reported in the balance sheet as asset and liability, and an operating lease remains off-balance sheet. The critical feature of FAS 13 is the bright-line approach (e.g., 75 percent of the estimated economic life or 90 percent of the leased asset's fair value) to distinguish capital leases from operating leases. Such bright-line criteria allow firms to structure their lease contracts and classify most leases as off-balance-sheet operating leases (Dye, Glover, and Sunder 2015; Gao and Jiang 2020). For example, as of 2022, the sum of the commercial real estate leasing market, the industrial equipment leasing market, and the automobile leasing market are \$455 billion (\$257 billion, \$160 billion, and \$38 billion, respectively), according to IBISWorld. In 2015, before the announcement of ASC 842, the sum of future four years' undiscounted minimum payments under operating leases by publicly listed firms from Compustat aggregated up to a total of \$472 billion, compared to \$26 billion under capital leases (\$608 billion and \$33 billion in 2022's dollar, based on a 1.29 inflation adjustment). All these numbers suggest that a significant amount of assets and liabilities are omitted from the reporting entities' balance sheets. Unsurprisingly, the SEC requested the Financial Accounting Standards Board to reevaluate lease accounting to address the off-balance-sheet concern after Enron and other accounting scandals in early 2000.

After over ten years of joint forces between the FASB and the International Accounting Standard Board, the boards finally announced the new lease accounting standard in 2016 (ASU 2016-02). ASC 842 and IFRS 16 were effective in 2019. The major change in the new standards requires most long-term leases to be recognized in the balance sheet. ASC 842 has two types of

Court, N.D. Illinois, Eastern Division, case no. 12-01769-8-RDD).

leases to allow firms to continue using their existing information systems, while IFRS 16 has only one type of leases.⁵ However, both standards exempt the following two lease transactions from being recognized in the balance sheet: a) leases with a term shorter than a year and b) leases with variable payments not based on publicly observable rates or indices (e.g., CPI or interest rates).

One criticism repeatedly received from comment letters about the new lease standard's exposure drafts in 2010 and 2013 was the high implementation costs. Among FASB members voting on the new lease standard proposal, four assented and three dissented, a much weaker support than that for FAS 13 in 1976. Since our study focuses on lenders, we reviewed lenders' comment letters to the 2013 exposure draft. In the comment letter submitted on Aug. 28, 2013, the American Bankers Associations stated, "...we believe that lessee accounting is still too complicated and we are not convinced that the vast majority of financial statement users—especially lenders to small businesses—will obtain a sufficient increase in decision-useful value to justify the change." The mentioned high costs are, for example, adjusting financial models that capitalized off-balance-sheet operating leases, changing lease contracts that were designed for the bright-line recognition criteria, and reevaluating negative covenants in debt contracts.

ABA further listed accounting metrics affected by the new lease accounting proposal: leverage ratios, long-term debt-to-equity ratios, fixed asset ratios, intangible asset limitations, earnings before income taxes, depreciation, amortization (EBITDA), net income, and operating cash flows. ABA argued, "As users of financial statements prepared by bank borrowers, we believe that most existing covenants will need to be changed as a result of the new standard. It should be noted that this is a time-consuming process: banks will need to contact customers; explain the reason for the change; in some cases, renegotiations can result in other costs either to banks or their customers who may want to renegotiate other portions that they would not otherwise

⁵ See Christensen (2023) for an analysis across the US, UK, Canada, and Australia.

consider; banks will need to involve legal counsel (for many smaller banks, this will likely involve hiring outside counsel); and banks will need to obtain signatures from customers. In addition to the legal and other administrative costs involved [in changing] the contracts, significant time will be needed to determine the appropriate metrics to be included going forward.” The Mortgage Bankers Association and the Commercial Finance Association also joined the opposition in their comment letters submitted in September 2013. CFA presented survey results based on 23 members. Only 8 participants support the proposal, while 15 participants object. Moreover, 21 respondents indicated that they would prepare for renegotiating impacted balance sheet ratios in negative covenants.

In summary, the obvious benefit of reporting all long-term leases in the balance sheet may come with substantial contracting costs when contracting parties do not prioritize accounting choices. Therefore, we seek to identify conditions under which lenders would care about accounting choices by including a complete set of long-term leases in liability.

2.2 Studies on Recognition Criteria

Accounting theories have examined recognition thresholds in various settings. Demski (1973) views accounting information as a partition of the underlying economic state space. A better accounting alternative is described as producing a finer partition or more precise information. However, many accounting choices cannot be translated into finer or coarser partitions. For example, disclosing future five-year lease commitments in the footnote under the old standard, ASC 840, is not necessarily more or less precise than recognizing the present value of all future lease commitments in the balance sheet under the new standard, ASC 842. Therefore, such a partitioning approach to compare accounting choices is not quite practical. However, another important insight from Demski (1973) is that without identifying a financial statement user’s utility function or specific preferences, one cannot claim any accounting alternative to optimize the user’s

decisions. For example, FASB's mission is "...to establish and improve financial accounting and reporting standards to provide useful information to investors and other users of financial reports..." No accounting standard can possibly be the best accounting choice for *all* users. Therefore, some users adopt the standard if it is their preferred alternative, and others customize their accounting choices by deviating from the standard. In this study, we first aim to document lenders' preferred choices regarding whether to include all long-term leases in liability before we examine the impact of the new lease accounting standard on their accounting choices.

Dye (2002) focuses on reporting entities' classification manipulation (e.g., capital versus operating leases under ASC 840) and whether standard setters anticipate such manipulation. After endogenizing the reporting entities' business decisions, Dye, Glover, and Sunder (2015) extend the idea to show the impossibility of a financial engineering-proof standard. For instance, firms restructure their lease contracts to be close to but not above the bright-line threshold when the threshold is, for example, 75 percent of the leased asset's estimated economic life. Gao and Jiang (2020) show that, when manipulation incentives are severe, such discrete recognition criteria still convey more information and lead to higher efficiency than a continuous recognition measurement (e.g., ASC 842) because a continuous regime encourages more manipulation than a discrete regime. Although our study does not examine opportunistic behavior because we do not observe the unbiased truth, lease accounting has been a popular (and potentially suitable) setting for researchers to examine accounting recognition criteria.

2.3 Studies on the Use of Accounting in Debt Contracting

Prior studies in debt contracting suggest that lenders adjust US GAAP accounting numbers to reduce managerial opportunistic behavior, mitigate the agency problem, and improve firm valuation and performance. Leftwich (1983) shows that lenders adjust reported US GAAP numbers (e.g., capitalizing off-balance-sheet leases) to address the potential conflict of interest

between stockholders and bondholders. Beatty, Cheng, and Zach (2019) and Li (2010) examine the definition of earnings in debt contracts and documents that lenders modify reported US GAAP earnings by removing the transitory components. Demerjian (2011) presents the decreased use of balance-sheet negative covenants during 1996-2007 and finds that the volatility of the book value of equity relative to the volatility of earnings is correlated with the declining use. He further documents that borrowers with more physical assets and fewer leased assets are correlated with the use of balance sheet covenants by lenders, inferring that lenders avoid lease and intangible asset accounting. Demerjian, Donovan, and Larson (2016) further examine whether lenders exclude the impact of SFAS 159 fair value accounting in negative covenant definitions. They find that 14.5 percent of 2,615 contracts from 2008-2012 do not adopt SFAS 159, consistent with lenders not appreciating book value volatilities attributable to accounting rules. Our study extends this literature by focusing on lenders' liability definition with respect to lease accounting choices. Beatty, Ramesh, and Weber (2002) present that interest rates are lower for debt contracts that exclude voluntary and mandatory accounting changes from the covenant compliance calculation, suggesting borrowers pay higher rates for accounting flexibility to decrease the covenant violation likelihood and duplicate record-keeping costs. Christensen and Nikolaev (2017) document that lenders are more likely to exclude US GAAP changes for debt covenants defined in recent years.

Studies also examine how credit rating agencies adjust US GAAP accounting numbers. Kraft (2015) presents that Moody's credit analysts adjust firms' reported US GAAP numbers to capture credit risk better. Batta and Muslu (2017) further show that credit rating agencies make conservative adjustments to US GAAP earnings to cater to their clients. Basu and Naughton (2020) document that recognized pension liability under SFAS 158 is associated with a lower credit rating than the disclosed pension liability during the pre-period, suggesting the differential impact of recognition versus disclosure on credit rating agencies.

2.4 Studies on Lease Accounting

Existing lease accounting studies have examined various financial statement users. When users are the reporting firms' managers, El-Gazzar, Lilien, and Pastena (1986) examine managers' lease accounting choices before SFAS 13, and Imhoff and Thomas (1988) document managers' lease accounting changes after SFAS 13. Specifically, firms switch from capital leases to operating leases after SFAS 13 requires capitalizing capital leases in the balance sheet but not operating leases. Recently, Chen, Correia, and Urcan (2023) showed that firms switching from expensing to capitalizing leases in the Czech Republic, Greece, Italy, and the Slovak Republic around 2005 reduced their employment and capital expenditures. They claim that lenders may take advantage of deteriorated financial ratios from capitalization, leading to more restrictive investment decisions by lessees. However, Ma and Thomas (2023) failed to find consistent results among US firms after ASC 842, which requires capitalization of operating leases. Ma and Thomas first present that firms switched from operating leases to capital expenditures (i.e., from leasing to buying) after ASC 842's announcement in 2016. More interestingly, they find *no* evidence of a decreased firm performance, declined equity market value, increased equity risk, decreased credit ratings, increased debt covenant violations, or decreased employment.⁶

ASC 842 and IFRS 16 exempt the following lease transactions from being recognized in the balance sheet: a) leases with a term shorter than a year and b) leases with variable payments not based on publicly observable rates or indices (e.g., CPI or interest rates). Ma and Thomas (2023) show a switch from long-term operating leases to short-term operating leases, and Hesse, Shin, and Wang (2023) present a change from fixed lease payments to variable lease payments.⁷

⁶ Using different specifications, He, Lourie, Ma, and Zhu (2023) found an improvement in credit ratings after adopting ASC 842 compared to the pre-period.

⁷ Yoon (2022), Christensen, Linsmeier, and Wangerin (2023), Li and Venkatachalam (2022), and Gordon, Wang, and Zhao (2023) document consistent evidence of these shifts. When focusing on the airline industry, Li and Venkatachalam further document the idle capacity of the purchased fleet, which could be leased before ASU 842.

Both findings are consistent with the impossibility of a financial engineering-proof standard in Dye, Glover, and Sunder (2015). This cat-and-mouse game between standard setters and reporting entities has repeated in history (e.g., SFAS 13, IFRS, or other regimes).

When users are equity investors, El-Gazzar (1993) documents negative market reactions to SFAS 13 announcements. The negative market reaction is more pronounced for firms with a tighter indebtedness restriction, suggesting a spillover effect from the fixed income instrument to the equity instrument. Imhoff, Lipe, and Wright (1993) and Ely (1995) find a positive correlation between stock return volatility and the adjusted leverage ratio attributing to the as-if capitalized operating leases based on footnote disclosures. Dhaliwal, Lee, and Neamtiu (2011) confirm consistent results using alternate risk assessment measures. They conclude that investors do consider off-balance-sheet operating leases in their risk calculation. Bratten, Choudhary, and Schipper (2013) compare the unadjusted leverage ratio to the adjusted leverage ratio for off-balance-sheet operating leases. Surprisingly, they document an insignificant difference, suggesting that equity investors are indifferent between the accounting alternatives.⁸

When users are lenders, Altamuro, Johnston, Pandit, and Zhang (2014) show that the adjusted financial ratios for off-balance-sheet operating leases explain the variations in loan interest rates and credit ratings *incremental* to the unadjusted ratios. Gordon, Wang, and Zhao (2023) further present surprising results that rental expense from the income statement explains most variations in loan interest rates. Including the as-if capitalized operating lease obligations or the capital lease obligations does not improve the explanatory power. The results are robust before and after ASC 842. Cheng, Jagg, Yan, and Young (2022) present that most contracts adopt a frozen

⁸ Other lease accounting studies focusing on equity investors are the following: Hill, Lobo, and Wang (2022) and Cheng, Geng, and Zhao (2022) examine the relationship between stock returns and the portion of leverage ratio attributable to operating leases. HLW does not find significant associations, while CGZ documents a more significant relationship after ASC 842. Milian and Lee (2023) document negative stock returns to earnings announcements in the first quarter after ASC 842 for operating lease-intensive firms.

or semi-frozen GAAP clause, consistent with the basis for conclusions of ASC 842 (ASU-2016-02 Section C Paragraph 14). Semi-frozen GAAP refers to the option to renegotiate whenever US GAAP changes. Beckman and Kale (2023) find that the as-if recognized operating leases based on S&P valuation formulae are significantly higher than those using the post-ASC 842 financial statement disclosures. Such a difference is due to inconsistent lease terms when the S&P method estimates a significantly longer lease term than what is disclosed in Form 10-K.

Our study complements the existing lease accounting literature by focusing on the recognition criteria lenders prefer. Specifically, such preference is inferred by whether a debt contract includes off-balance-sheet leases in the definition of liability. Based on FASB's surveys and existing studies (e.g., Cheng, Jagg, Yan, and Young 2022; Gordon, Wang, and Zhao 2023), we expect that lenders do not prioritize accounting choices until they experience negative consequences from accounting-related fraud. We use accounting fraud that occurred to other borrower clients as a quasi-exogenous shock to the examined borrower as our empirical strategy, which we will describe in detail in the next session.

3. DATA AND EMPIRICAL STRATEGY

3.1 Debt Contract Sample Construction and Description

To identify debt contracts, we first extract all Exhibit 10 material contracts attached to any SEC filings from EDGAR during the period of 2014-2020. The sample period starts from 2014, two years before the announcement of ASU 2016-02. We restrict our sample to 8,550 contracts in which the first 500 words contain at least one of the following terms: loan, debt, collateral, guarantee, debenture, borrower, lender, bond, and bank. Next, we manually review these contracts to confirm whether they are debt contracts. For 7,773 confirmed contracts, we identify contract dates and liability definitions in the negative covenant or general definition sections. After

removing 715 contracts with unavailable contract dates (e.g., incomplete amended contracts), our final sample consists of 7,058 debt contracts by 3,151 distinct borrowers (Table 1 Panel A). Roughly 48 percent of the contracts are amendments. The average contract amount is \$825 million, and the average number of days the contract has been outstanding is 525. Regarding negative covenants related to liability, 80 percent of the contracts have indebtedness covenants (restrictions on additional borrowings) and 68 percent have a maximum leverage ratio covenant. Concerning leases and lease accounting, 86 percent of the contracts mention leases at least once in the negative covenant section and 71 percent mention off-balance-sheet leases at least once in the negative covenant section (Table 1 Panel B). Off-balance-sheet leases are often referred to as synthetic leases or operating leases. These statistics suggest that lenders know the off-balance-sheet leases under the lease accounting standard SFAS 13, effective since 1977.

Our variable of interest is whether off-balance-sheet leases are included in the definition of liability in the indebtedness or maximum leverage ratio covenants (*Capitalizing off-balance sheet*).⁹ With respect to the new lease accounting standard, ASC 842, we collect whether the contract adopts ASC 842 or not (*Floating GAAP*). Only 27 percent of the contracts include off-balance-sheet leases in liability (*Capitalizing off-balance sheet* equals one for 1,906 contracts), while 60 percent of the contracts choose to adopt ASC 842 (*Floating GAAP* equals one for 4,235 contracts). Interestingly, the correlation between the two choices is as low as -0.28, suggesting that the two decisions reflect different concerns. Our focus is the accounting recognition criteria, captured by whether off-balance-sheet leases are included in the liability definition regarding the indebtedness or maximum leverage ratio covenant.

Existing debt contracting studies often restrict the sample to the DealScan-Compustat coverage. Therefore, we compare the DealScan subsample to the non-DealScan subsample. We

⁹ One contract example of including off-balance-sheet leases in the definition of liability under the negative covenant section is at <https://www.sec.gov/Archives/edgar/data/1492691/000149269117000056/knx-ex101x9302017.htm>.

lost 3,643 contracts for which we failed to identify the matched contract date and contract value in DealScan. We further lost 278 contracts due to the inability to identify borrowers from Compustat. The successfully merged DealScan sample has 3,137 contracts, and the non-DealScan sample has 3,921 contracts. The DealScan sample of 3,137 contracts is associated with 1,529 distinct borrowers, 406 distinct lead lenders, and 593 participating non-lead lenders. Lead arrangers are responsible for originating and monitoring the loan while participating non-lead lenders invest in a fraction of the loan without directly interacting with the borrower. Therefore, our regression analysis focuses on lead lenders only.

It is worthwhile to discuss the significant differences between the two samples (Table 1 Panels B and C). Roughly 55 percent of the DealScan contracts are amendments, while only 42 percent of the non-DealScan contracts are amendments. The average contract amount is \$1,249 million for the DealScan sample but only \$601 million for the non-DealScan sample. The average number of days the contract has been outstanding is 623 for the DealScan sample and 447 for the non-DealScan sample. Regarding negative covenants related to liability, 85 (76) percent of the DealScan (non-DealScan) contracts have indebtedness covenants, and 86 (54) percent have a maximum leverage ratio covenant. Concerning leases, 97 (77) percent of the DealScan (non-DealScan) contracts mention leases at least once in the negative covenant section, and 87 (58) mention off-balance-sheet leases at least once in the negative covenant section. About 36 (20) percent of the DealScan (non-DealScan) contracts include off-balance-sheet leases in liability, and 52 (66) percent of the DealScan (non-DealScan) contracts choose to adopt ASC 842. These statistics suggest that DealScan covers larger transactions by more sophisticated lenders who request more stringent negative covenants and are more likely to customize their accounting choices without adopting FASB's standards.

3.2 Empirical Model and Strategy

Motivated by existing debt contracting and lease accounting studies (e.g., Demerjian, 2011; Christensen, Macciocchi, and Morris 2022; Cheng, Geng, and Zhao 2022; Gordon, Wang, and Zhao 2023), We examine more than thirty factors that could be associated with the decision of whether to include off-balance-sheet leases in liability using the following model:

$$\begin{aligned} \text{Capitalizing off-balance sheet leases}_j = & \beta \text{Accounting fraud}_i + \sum y_t \text{Year}_t + \sum \eta_l \text{DealChar}_{l,j} \\ & + \sum \delta_f \text{LenderChar}_{f,i} + \sum \delta_a \text{BorrowerChar}_{a,k} + \sum d_n \text{Industry}_n + \varepsilon_j, \end{aligned} \quad (1)$$

where j refers to a debt contract, i refers to a lender, t refers to a calendar year, k refers to a borrower, and n refers to an SIC four-digit industry.

Capitalizing off-balance sheet leases is a dichotomous variable to indicate whether a contract includes off-balance-sheet leases in the liability definition. *Accounting fraud* refers to a lead lender's past accounting fraud experience with *other* borrower clients. We use a lead lender's experiences from *other* borrower clients over the most recent fiscal year before the debt contract date as a quasi-exogenous shock to the examined borrower because the examined borrower is unlikely to influence its lender's other clients' activities.¹⁰ We identify lead lenders by searching "agent," "arranger," "lead bank," "lead manager," or "bookrunner" in DealScan's primary role variable, following Bharath, Dahiya, Saunders, and Srinivasan (2011) and Ivashina (2009).

We capture lenders' accounting fraud experiences by the counts of three events: a) a borrower client receiving SEC's Accounting and Auditing Enforcement Releases (AAER) related to financial misstatements on the balance sheet or income statement (*Num of AAER*), b) a borrower client restating financial statements due to financial fraud, irregularities, and misrepresentation (*Num of Restatement-Fraud*), or c) a borrower client's auditor issuing SOX 404 internal material

¹⁰ Existing studies have used a similar technique to draw causal inferences. For example, Murfin (2012) finds that lenders tighten their negative covenants after experiencing payment defaults from other borrower clients, and Christensen, Macciocchi, and Morris (2022) document that lenders are more likely to use performance-based covenants rather than capital-based covenants after experiencing defaults from other borrower clients.

weaknesses (ICW) related to financial fraud, irregularities, and misrepresentation (*Num of ICW-Fraud*). We take a simple average across lead lenders when a contract has more than one lead lender. Further, we remove other borrower clients' accounting fraud events in the same SIC four-digit industry as the examined borrower to avoid any industry-level confounding events. Lenders expect to be more likely to include off-balance-sheet leases in liability as they experience more accounting fraud events from other borrower clients.

$\sum y_t Year_t$ refers to dichotomous variables for the years from 2016 because ASU 2016-02 announced the new leasing standard. Thomas and Ma (2022) document a significant shift in leasing accounting choices after 2016, although ASC 842 is not effective until 2019. We aim to examine whether the new standard affects the decision to include off-balance-sheet leases in liability using these year dichotomous variables.

$\sum \eta_l DealChar_{l,j}$ refers to fifteen debt contract characteristics. For example, whether the contract is an amendment (*Amendment*), the transaction amount (*Deal size*), the number of days the contract has been outstanding (*Outstanding days*), the number of months from the contract initiation date to the maturity date (*Maturity*), whether the contract mentions lease at least once (*Mention lease*), whether the contract mentions off-balance-sheet lease (*Mention off-balance sheet leases*), whether the contract has an indebtedness covenant (*Indebtedness covenant*), whether the contract has a maximum leverage ratio covenant (*Max leverage covenant*), the distance to a technical default on the indebtedness covenant (*Leverage slack*), the distance to a technical default on the maximum capital lease covenant (*Capital lease slack*), whether the contract is backed by physical collaterals (*Secured*), the number of lead lenders (*Num of lead lenders*), the number of participating non-lead lenders (*Num of non-lead lenders*), the number of negative financial covenants (*Num of financial covenants*), and whether the contract has a performance pricing provision (*Performance pricing provision*).

$\sum \delta_f LenderChar_{f,i}$ refers to three lender characteristics, for instance, whether the lead lender has established expertise in the borrower's industry (*Lender industry expertise*), whether the lead lender has a long-term relationship with the borrower in the past (*Lender relationship*), and the lead lender's size captured by loan initiation amounts (*Lender size*). $\sum \delta_a BorrowerChar_{a,k}$ refers to thirteen borrower characteristics, for example, *Borrower size*, the as-if capitalized operating lease (*Estimated operating lease*), *Capital lease*, *Long-term leverage*, the portion of total assets that are *Tangible assets* or *Intangible assets*, *R&D expense*, *Net rental expense*, return-on-assets (*ROA*), market-to-book ratio (*M/B*), Altman's Z-score (*Zscore*), *Earnings volatility*, and *Book value change volatility*. We include SIC four-digit industry fixed effects $\sum d_n Industry_n$, borrower credit rating fixed effects, and loan type fixed effects. Credit ratings are the borrowers' S&P long-term debt rating. Loan types are, for example, leverage buyout, working capital debt, debt repayment, or commercial paper backup. Such a comprehensive list of independent variables enables us to understand the determinants of lenders' decision to include all off-balance-sheet leases in liability.

We also examine another decision, whether to adopt the new lease accounting standard ASC 842 (*Floating GAAP*), compared to our primarily examined decision, *Capitalizing off-balance sheet leases*. In a placebo analysis, we examine lenders' non-accounting-fraud experiences by three other events: a) a borrower client's debt defaults, captured by S&P's "D," "DD," "DDD," or "SD" long-term ratings (*Num of Default*), following Dimitrov, Palia, and Tang (2015), b) a borrower client restating financial statements due to clerical errors (*Num of Restatement-Errors*), or c) a borrower client's auditor issuing SOX 404 ICW related to clerical errors (*Num of ICW-Errors*). The placebo analysis examines whether our main analysis is potentially driven by confounding events associated with the lenders' other borrower clients. Please refer to Appendix A for detailed variable definitions and data sources.

4. RESULTS

4.1 Regression Variable Distributions

Table 2 presents the distributions of variables used in our regression analysis based on the post-merged 3,137 debt contracts. Over the most recent fiscal year before the debt contract, the average number of AAER received by lead lenders' other borrower clients is 4.15, with the interquartile range from 1.67 to 5.75 and the standard deviation of 3.37. The average number of fraud-related restatements issued by lead lenders' other borrower clients is 6.06, with the interquartile range from 2.00 to 8.67 and the standard deviation of 5.25. The average number of fraud-related SOX 404 internal control weaknesses (ICW) received by lead lenders' other borrower clients is 11.17, with the interquartile range from 3.00 to 14.81 and the standard deviation of 12.23. The frequency of fraud-related ICW is higher than fraud-related restatements and AAER. All three events have reasonable variations for a powerful empirical test. Compared to accounting-fraud-related experiences, non-accounting-fraud-related experiences have a higher frequency; for example, the average number of debt defaults by lead lenders' other borrower clients is 42, the average number of error-related restatements issued by lead lenders' other borrower clients is 92, and the average number of error-related internal control weakness associated with lead lenders' other borrower clients is 242.

The average lead lender in our sample initiated \$44 billion in loans during the twelve months before the examined debt contract date (the mean value of *Lender size*). The average lead lender in our sample has at least one other loan initiation with the examined borrower during the past five years before the examined debt contract date (the mean value of *Lender relationship*). On average, five percent of the sample lead lender's loan portfolio comes from the same SIC two-digit industry as the examined borrower (the mean value of *Lender industry expertise*). About 41 percent

of the sample debts are backed by physical collaterals (the mean value of *Secured*). The average number of lead lenders is 3.79, and the average number of participating non-lead lenders is 5.36. These lender and debt contract characteristics are consistent with prior debt contracting studies based on the DealScan data during the overlapped period.

The average market value of the sample borrower is \$19 billion (the mean value of *Borrower size*), suggesting that borrowers are, on average, smaller than lead lenders in our sample. The estimated off-balance-sheet operating lease accounts for 6 percent of the sample borrower's beginning total assets, capital lease accounts for zero percent (consistent with most long-term leases are not reported in the balance sheet before ASC 842), long-term liabilities account for 34 percent, tangible assets account for 29 percent, intangible assets account for 27 percent, R&D expense accounts for 2 percent, and rental expense net of rental revenue accounts for 1 percent. These borrower characteristics are consistent with prior lease accounting studies based on the Compsutat data during the overlapped period.

4.2 Main Test: Lenders' Past Accounting Fraud Experiences and the Decision to Include All Leases in Liability Definition

Table 3 examines our primary hypothesis on whether lenders' past accounting fraud experience is associated with their decision to include off-balance-sheet leases in the liability definition. Models (1)-(3) examine Equation (1) in an Ordinary Least Squares (OLS) regression for three accounting fraud events by the lead lenders' other borrower clients. Models (4)-(6) augment Equation (1) in an OLS regression by incorporating lead lender fixed effects that are based on lenders' holding companies. The rationale for lead lender fixed effects is to capture company-specific debt contract boilerplates, for example, always excluding off-balance-sheet leases from the liability definition for all loans initiated by the bank. Models (7)-(9) examine Equation (1) in a Logistic regression because the dependent variable, *Capitalizing off-balance*

sheet leases, is dichotomous. In the Logistic regression model, we lost 442 debt contracts and could not include lender fixed effects or borrower credit rating fixed effects.

Across three different accounting fraud events in nine different regression models, we consistently observe a significantly positive association between the lead creditors' past accounting fraud experiences and the decision to include off-balance-sheet leases in the liability definition. The small magnitude of coefficients for lead creditors' past accounting fraud experiences suggests that only a few accounting fraud events from other borrower clients likely lead lenders to reconsider their calculation by moving accounting choices to a higher priority.

The significantly negative coefficients of the 2017-18 years' dichotomous variables are consistent with the negative comment letters submitted by lenders' trade associations (e.g., the American Bankers Association, the Mortgage Bankers Association, and the Commercial Financial Association). After the new lease standard's announcement in ASU 2016-02, lenders are less likely to include off-balance-sheet leases in liability. However, these negative effects are subsumed by lead lender fixed effects, suggesting that banks do not significantly alter their lease accounting choices around the announcement or implementation of ASC 842. Among three lender characteristics, we find weak evidence that larger banks are less likely to include all leases in the liability definition. However, the negative effect is again subsumed by lead lender fixed effects.

Among fifteen debt contract characteristics, we find that contracts having a maximum leverage ratio covenant or mentioning off-balance sheet leases are associated with a higher likelihood of including off-balance sheet leases in the liability definition. Contracts with a greater distance from the capital lease covenant amount (*Capital lease slack*) are also positively associated with including all leases in liability. On the contrary, secured debts and debts with more lead lenders are less likely to include off-balance sheet leases in liability, consistent with physical

collaterals could serve as a substitute for covenant restrictions and more lead lenders create a potential free-riding problem (Sufi 2007).

Among thirteen borrower characteristics, borrowers with more long-term tangible or intangible assets (i.e., a greater need for external financing) are associated with lenders' requests to include off-balance-sheet leases in liability. In contrast, borrowers with a greater long-term leverage ratio or more net rental expense are negatively associated with lenders' demand for including all leases in liability. Applying a multiple to net rental expense could be an alternate approach to capture off-balance-sheet leases (Gordon, Wang, and Zhang 2023).

Overall, lead lenders' past accounting fraud experiences are significantly associated with their decision to include off-balance-sheet leases in the covenants' liability definition after controlling for more than thirty contracts' and participating firms' characteristics and including lender fixed effects. The small coefficient magnitude of lenders' past accounting fraud experiences suggests that lenders are likely to reconsider their lease accounting choices after experiencing only a few accounting fraudulent events from other borrower clients.

4.3 Placebo Test: Lenders' Past Accounting Non-Fraud Experiences

Table 4 examines the placebo analysis to address the concern that our main analysis is potentially driven by confounding events associated with the lenders' other borrower clients. Table 4 follows the columnar structure of Table 3 and replaces the three accounting fraud experience variables with the three non-accounting fraud experience variables (debt defaults, restatements due to clerical errors, or ICW due to clerical errors). Across nine models in Table 4, we do not observe any significant relationships between lead lenders' non-accounting fraud experiences and lenders' decision to include off-balance sheet leases in the liability definition, suggesting that lenders' past accounting fraud experiences indeed bring their attention to including all leases in covenants' liability definition in our main analysis.

4.4 Different Decision: Whether to Adopt ASC 842 (i.e., Floating GAAP)

Many existing studies use the frozen or floating GAAP clause to infer the usefulness of accounting choices or standards for lenders. For example, Frankel, Seethamraju, and Zach (2008) find that DealScan loans move away from using net-worth covenants that include goodwill to tangible net-worth covenants that exclude goodwill after SFAS 141 and 142 that eliminate the pooling method for acquisitions and the amortization of goodwill. Demerjian, Donovan, and Larson (2016) document that 14.5 percent of DealScan loans modify covenants to exclude the effects from SFAS 159 fair value accounting. Based on 16,655 debt contracts without limiting to DealScan's coverage, Christensen and Nikolaev (2017) find that the percentage of contracts adopting a fixed GAAP clause (i.e., not adopting any future new standards) has increased from 32% in 1994 to 73% in 2012. Regarding the new lease accounting standard, Cheng, Jagg, Yan, and Young (2022) show that 87 percent of DealScan loans do not adopt ASC 842, and Gordon, Wang, and Zhang (2023) present that borrowers' rental expenses explain the variations in interest rate required in the private loan contracts more than the as-if capitalized operating leases.

The univariate correlation between the decision to adopt ASC 842 and the decision to include off-balance-sheet leases in the covenants' liability definition is -0.28 in our sample of 7,058 debt contracts, suggesting that different motivations may drive the two decisions. The two distinct decisions could lead to opposite inferences about the usefulness of accounting choices. Therefore, Table 5 re-examines the floating versus frozen GAAP clause for ASC 842. We replace Table 3's dependent variable, *Capitalizing off-balance sheet leases*, with whether to adopt ASC 842 (*Floating GAAP*) and follow the same columnar structure. We find that lead lenders' past accounting fraud experiences are weakly and negatively associated with the decision to adopt ASC 842. Specifically, as the lead lenders' other borrower clients report more ICW weakness due to accounting fraud, the lenders are less likely to adopt the new lease accounting standard. According

to the variable distributions in Table 2, fraud-related ICW events occur more frequently than fraud-related restatements or SEC's AAER. The lack of significant associations between less frequently occurred fraudulent events suggests that past accounting fraud experiences may not be the reason for not adopting ASC 842. The relationship between fraud-related ICW and the reluctance to adopt the new standard may be driven by the lenders' lost confidence in the borrower's internal information system.

Several contract characteristics present the opposite coefficient signs for the decision to adopt ASC 842, compared to the decision to include all leases in liability. For instance, contracts mentioning off-balance sheet leases are less likely to adopt ASC 842 but are more likely to include off-balance sheet leases in liability, suggesting that some lenders prefer customizing accounting choices rather than using the accounting standard. Contracts with more lead lenders (a potential free-riding program) are more likely to adopt ASC 842 and less likely to include off-balance sheet leases in liability. Previously, in Table 1 Panels B and C, DealScan contracts are more likely to include all leases in liability but are less likely to adopt ASC 842 than non-DealScan contracts. In sum, there seems to be a substitution choice between whether to customize accounting choices by incorporating all long-term leases in covenants' liability definition and whether to adopt the new lease accounting standard, ASC 842.

4.5 Time-Series or Cross-Sectional Analysis

Lastly, we exploit time-series and cross-sectional variations in our main results to understand the underlying mechanism more deeply. We add a partitioning variable and its interaction term with one of the lenders' accounting fraud experience proxies and follow the same model specifications as those in Table 3's Models (1)-(3). Table 6 reports the interaction terms' coefficients and omits the remaining variables' coefficients. Our main analysis in Table 3 presents the reluctance to include off-balance-sheet leases in liability during 2017-2018. However, we do

not find our main result differs during 2017-18 compared to other years (Table 6 Panel A). The positive association between the lenders' past accounting fraud experiences and their inclusion of off-balance-sheet leases in liability seems independent of ASC 842's announcement.

However, several contracts' or participating firms' characteristics are associated with our main result. In Panels B and C of Table 6, our results weaken when the borrower and the lender have a long-term relationship or when the debt is backed by physical collaterals. Long-term relationship lending or physical collaterals could substitute for (liability) monitoring efforts (Sufi 2007). In Panels D and E of Table 6, our main results become more pronounced when the borrower has more estimated operating leases or when the contract has more negative financial covenants, both suggesting the need or demand for monitoring off-balance sheet liabilities.

5. CONCLUSION

We examine the recognition criteria for liability concerning lenders' preferences in the lease accounting setting. Among 7,058 debt contracts filed to the SEC from 2014-2020, 86 percent of the contracts mention leases and 71 percent mention off-balance-sheet leases. Surprisingly, only 27 percent of the contracts request to include the off-balance-sheet long-term leases in the definition of liability. After exploiting more than thirty factors, one condition associated with the choice of including all long-term leases in liability stands out. As more other borrower clients received SEC's Accounting and Auditing Enforcement Releases, restated financial reports due to fraudulent activities, or reported SOX's 404 internal control weakness due to financial fraud, a lender is more likely to bring off-balance-sheet leases back to the definition of liability. These findings suggest that lenders' first priority in designing contracts is unlikely to optimize accounting choices. However, when lenders experience negative consequences of accounting-related fraud

from their borrower clients, they reconsider their calculation by moving accounting choices to a higher priority.

Our study infers lenders' preferences by classifying contractual terms. Results from such empirical exercise must be combined with surveys (e.g., standard setters' solicitations of comment letters) and other methodologies (e.g., laboratory experiments with detailed controls) to gain a holistic view of lenders' preferences. Moreover, our endeavor focuses on US contracts concerning one lease accounting choice. Future research can consider examining non-US contracts or other accounting choices (e.g., measurement basis and subsequent re-evaluation) to broaden our understanding of lenders' recognition criteria.

REFERENCES

- Altamuro, J., Johnston, R., Pandit, S., & Zhang, H. (2014). Operating leases and credit assessments. *Contemporary Accounting Research*, 31(2), 551-580.
- Basu, R., & Naughton, J. P. (2020). The real effects of financial statement recognition: Evidence from corporate credit ratings. *Management Science*, 66(4), 1672-1691.
- Batta, G., & Muslu, V. (2017). Credit rating agency and equity analysts' adjustments to GAAP earnings. *Contemporary Accounting Research*, 34(2), 783-817.
- Beatty, A., Cheng, L., & Zach, T. (2019). Nonrecurring items in debt contracts. *Contemporary Accounting Research*, 36(1), 139-167.
- Beatty, A., Liao, S., & Weber, J. (2010). Financial reporting quality, private information, monitoring, and the lease-versus-buy decision. *The Accounting Review*, 85(4), 1215-1238.
- 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 and Economics*, 33(2), 205-227.
- Beckman, J. K., & Kale, D. (2023). Do the Lease Accounting and Disclosure Changes Improve the Information Used in Making Credit Risk Assessments? Available at SSRN: <https://ssrn.com/abstract=4484619>.
- Bharath, S. T., Dahiya, S., Saunders, A., & Srinivasan, A. 2011. Lending relationships and loan contract terms. *The Review of Financial Studies*, 24(4), 1141-1203.
- Bratten, B., Choudhary, P., & Schipper, K. (2013). Evidence that market participants assess recognized and disclosed items similarly when reliability is not an issue. *The Accounting Review*, 88(4), 1179-1210.
- Caskey, J., & Ozel, N. B. (2019). Reporting and non-reporting incentives in leasing. *The Accounting Review*, 94(6), 137-164.
- Chen, C. W., Correia, M., & Urcan, O. (2023). Accounting for Leases and Corporate Investment. *Accounting Review*, 98(3).
- Cheng, A., Geng, Y., & Zhao, S. (2022). Operating Leases and the Market's Assessment of Equity Risk: Evidence from the Adoption of ASC 842. Available at SSRN: 4186985.
- Cheng, L., Jaggi, J., Yan, M. Y., & Young, S. (2022). Debt Contracting and Changes to the Accounting for Leases: Implications of Accounting Standards Codification 842. Available at SSRN: <https://ssrn.com/abstract=4203733>.
- Christensen, D. 2023. An Evaluation of the Informativeness of the Dual-Classification System for Leases. University of Wisconsin Madison working paper.
- Christensen, D., Linsmeier, T., & Wangerin, D. D. (2023) Do Reporting Incentives and Consequences Change Under the New Lease Accounting Standard? Available at SSRN: <https://ssrn.com/abstract=4119935>.
- Christensen, H. B., and V. V. Nikolaev. 2017. Contracting on GAAP changes: large sample evidence. *Journal of Accounting Research* 55 (5): 1021-1050.
- Christensen, H. B., Macciocchi, D., Morris, A., & Nikolaev, V. V. (2022). Financial shocks to lenders and the composition of financial covenants. *Journal of Accounting and Economics*, 73(1), 101426.

- Dechow, P. M., Ge, W., Larson, C. R., & Sloan, R. G. (2011). Predicting material accounting misstatements. *Contemporary Accounting Research*, 28(1): 17-82.
- Demerjian, P. 2011. Accounting standards and debt covenants: Has the “balance sheet approach” led to a decline in the use of balance sheet covenants? *Journal of Accounting and Economics* 52 (2–3): 178–202.
- Demerjian, P. R., Donovan, J., & Larson, C. R. (2016). Fair value accounting and debt contracting: Evidence from adoption of SFAS 159. *Journal of Accounting Research*, 54(4), 1041-1076.
- Demski, J. S. (1973). The general impossibility of normative accounting standards. *The Accounting Review*, 48(4), 718-723.
- Dhaliwal, D., Lee, H. S., & Neamtiu, M. (2011). The impact of operating leases on firm financial and operating risk. *Journal of Accounting, Auditing & Finance*, 26(2), 151-197.
- Dimitrov, V., Palia, D., & Tang, L. (2015). Impact of the Dodd-Frank Act on credit ratings. *Journal of Financial Economics*, 115(3), 505-520.
- Dye, R. 2002. Classifications manipulation and Nash accounting standards. *Journal of Accounting Research* 40 (4): 1125–1162.
- Dye, R. A., Glover, J. C., & Sunder, S. (2015). Financial engineering and the arms race between accounting standard setters and preparers. *Accounting Horizons*, 29(2), 265-295.
- Eisfeldt, A. L., & Rampini, A. A. (2009). Leasing, ability to repossess, and debt capacity. *The Review of Financial Studies*, 22(4), 1621-1657.
- El-Gazzar, S. (1993). Stock Market Effects of the Closeness to Debt Covenant Restrictions Resulting from Capitalization of Leases. *The Accounting Review*, 68(2), 258-272.
- El-Gazzar, S., Lilien, S., & Pastena, V. (1986). Accounting for leases by lessees. *Journal of Accounting and Economics*, 8(3), 217-237.
- Ely, K. M. (1995). Operating lease accounting and the market's assessment of equity risk. *Journal of Accounting Research*, 33(2), 397-415.
- Frankel, R., Seethamraju, C., & Zach, T. (2008). GAAP goodwill and debt contracting efficiency: evidence from net-worth covenants. *Review of Accounting Studies* 13, 87-118.
- Gao, P., & Jiang, X. (2020). The economic consequences of discrete recognition and continuous measurement. *Journal of Accounting and Economics*, 69(1), 101250.
- Gordon, E., Wang, W., & Zhao, L. (2023). Hidden in plain sight: Operating lease accounting and private loan contracts. Available on SSRN: <https://ssrn.com/abstract=4582752>.
- He, H., Lourie, B., Ma, M., & Zhu, C. (2023). Operating Lease Recognition and Credit Assessment by Banks. Available at SSRN: <https://ssrn.com/abstract=4346220>.
- Heese, J., Shin, A., & Wang, C. C. (2022). Variable Leases Under ASC 842: First Evidence on Properties and Consequences. Available at SSRN: <https://ssrn.com/abstract=4266529>.
- Hill, P., Lobo, G. J., & Wang, S. (2022). Does ASC 842 Increase Operating Lease Information? Available at SSRN: 4147636.
- Imhoff Jr, E. A., & Thomas, J. K. (1988). Economic consequences of accounting standards: The lease disclosure rule change. *Journal of Accounting and Economics*, 10(4): 277-310.

- Imhoff Jr, E. A., Lipe Jr, R., & Wright Jr, D. W. (1993). The effects of recognition versus disclosure on shareholder risk and executive compensation. *Journal of Accounting, Auditing & Finance*, 8(4), 335-368.
- Ivashina, V. (2009) Asymmetric information effects on loan spreads. *Journal of Financial Economics*, 92(2): 300-319.
- Kraft, P. 2015. Rating agency adjustments to GAAP financial statements and their effect on ratings and credit spreads. *The Accounting Review* 90 (2): 641–674.
- Leftwich, R. “Accounting Information in Private Markets: Evidence from Private Lending Agreements.” *The Accounting Review* 58 (1983): 23–42.
- Li, B., & Mohan, V. (2022). Leasing Loses Altitude While Ownership Takes Off: Real Effects of the New Lease Standard. Available at SSRN: <https://ssrn.com/abstract=4300445>.
- Li, N. (2010). Negotiated Measurement Rules in Debt Contracts. *Journal of Accounting Research* 48(5): 1103-1144.
- Li, N. (2016). Performance Measures in Earnings-Based Financial Covenants in Debt Contracts. *Journal of Accounting Research* 54(4): 1149-1186.
- Liang, P. J. (2001). Recognition: An information content perspective. *Accounting Horizons*, 15(3), 223-242.
- Ma, M. S., & Thomas, W. B. (2023). Economic consequences of operating lease recognition. *Journal of Accounting and Economics*, 75(2-3), 101566.
- Milian, J. A., & Lee, E. J. (2023). Did the Recognition of Operating Leases Cause a Decline in Equity Valuations? *Journal of Behavioral Finance*, available at: <https://doi.org/10.1080/15427560.2023.2207021>.
- Murfin, J. (2012). The supply-side determinants of loan contract strictness. *Journal of Finance*, 67(5), 1565-1601.
- Rampini, A. A., & Viswanathan, S. (2013). Collateral and capital structure. *Journal of Financial Economics*, 109(2), 466-492.
- Sufi, A. (2007). Information asymmetry and financing arrangements: Evidence from syndicated loans. *The Journal of Finance*, 62(2), 629-668.
- Yoon, Y. S. (2023). Recognition Versus Disclosure: Operating Lease Capitalization and Managerial Leasing Decisions. Available at SSRN: <https://ssrn.com/abstract=3689446>.

Appendix A Variable Definitions and Data Sources

Variable	Definition	Source
Capitalizing off-balance sheet leases	An indicator variable that equals one if a contract includes off-balance-sheet leases in the liability definition and zero otherwise. The information is based on our collected information from EDGAR debt contracts.	EDGAR
Floating GAAP	An indicator variable that equals one if a contract adopts the new lease accounting standard, ASC 842 and zero otherwise. The information is based on our collected information from EDGAR debt contracts.	EDGAR
Num of AAER	The number of SEC’s Accounting and Auditing Enforcement Releases (AAER) related to financial misstatements on the balance sheet or income statement of other borrower clients in the lead lenders’ portfolios over the past year, based on the AAER data by Dechow, Ge, Larson, and Sloan (2011). Specifically, we exclude the AAER unrelated to financial misstatements (such as bribes or disclosure-related issues). AAER-related financial statements are identified when rec, rev, cogs, inv, reserve, debt, asset, pay, liab, mkt_sec, or inc_exp_se equals one. We take a simple average across lead lenders when a contract has more than one lead lender. We identify lead lenders by searching “agent,” “arranger,” “lead bank,” “lead manager,” or “bookrunner” in DealScan’s primary role variable, following Bharath, Dahiya, Saunders, and Srinivasan (2011) and Ivashina (2009). Lastly, we remove AAER events that occurred in the same SIC four-digit industry as the examined borrower to avoid any industry-level confounding events.	USC Leventhal AAER dataset
Num of Restatement -Fraud	The number of restatements related to financial fraud, irregularities, and misrepresentation (Audit Analytics: RES_FRAUD) of other borrower clients in the lead lenders’ portfolios over the past year. We take a simple average across lead lenders. Please refer to the definition of “Num of AAER” for how we identify lead lenders. We remove restatement events that occurred in the same SIC four-digit industry as the examined borrower to avoid any industry-level confounding events.	Audit Analytics
Num of ICW-Fraud	The number of SOX 404 internal control material weaknesses (ICW) related to financial fraud, irregularities, and misrepresentation (Audit Analytics: NOTEFF_FIN_FRAUD) of other borrower clients in the lead lenders’ portfolios over the past year. We take a simple average across lead lenders. Please refer to the definition of “Num of AAER” for how we identify lead lenders. We remove ICW events that occurred in the same SIC four-digit industry as the examined borrower to avoid any industry-level confounding events.	Audit Analytics
Num of Default	The number of debt default events experienced by other borrower clients in the lead lenders’ portfolios over the past year. We consider S&P’s “D,” “DD,” “DDD,” or “SD” long-term ratings as debt defaults (Capital IQ: RATINGSYMBOL), following Dimitrov, Palia, and Tang (2015). We take a simple average across lead lenders. Please refer to the definition of “Num of AAER” for how we identify lead lenders. We remove default events that occurred in the same SIC four-digit industry as the examined borrower to avoid any industry-level confounding events.	Capital IQ
Num of Restatement -Errors	The number of restatements related to clerical errors (Audit Analytics: RES_ACCOUNTING, an indicator variable for misstatements due to accounting standard compliance failure) of other borrower clients in the lead lenders’ portfolios over the past year. We take a simple average across lead lenders. Please refer to the definition of “Num of AAER” for how we identify lead lenders. We remove restatement events that occurred in the same SIC four-digit industry as the examined borrower to avoid any industry-level confounding events.	Audit Analytics
Num of ICW-Errors	The number of SOX 404 internal control material weaknesses (ICW) due to clerical errors (Audit Analytics: when NOTEFF_OTHER_REAS_KEYS equals one and NOTEFF_FIN_FRAUD does not equal one) of other borrower clients in the lead lenders’ portfolios over the past year. We take a simple average across lead lenders. Please refer to the definition of “Num of AAER” for how we identify lead lenders. We remove ICW events that occurred in the same SIC four-digit industry as the examined borrower to avoid any industry-level confounding events.	Audit Analytics

Appendix A Variable Definitions and Data Sources (Cont.)

Variable	Definition	Source
Lender industry expertise in ratios	The ratio of a lead lender's initiated loan amount in the same SIC two-digit industry as the examined borrower to the lead lender's total initiated loan amount during the twelve months before the debt contract date. We take a simple average across lead lenders. The initiated loan amount is calculated as the loan size (DealScan: DEAL_AMOUNT_CONVERTED) multiplied by a lead lender's share in the loan (DealScan: LENDER_SHARE). For 2,617 loans (77 percent of 3,137 loans in our sample) with missing lender share information, we use the average value of 14.3% as the share based on the non-missing sample.	DealScan
Lender relationship in loans	The number of loans a lead lender initiated with the examined borrower five years before the debt contract date. We take a simple average across lead lenders.	DealScan
Lender size in millions	The lead lender's sum of initiated loan amounts (DealScan: DEAL_AMOUNT_CONVERTED) during the twelve months before the debt contract date. We take a simple average across lead lenders. The initiated loan amount is calculated as the loan size multiplied by a lead lender's share in the loan. For 2,617 loans (77 percent of 3,137 loans in our sample) with missing lender share information, we use the average value of 14.3% as the share based on the non-missing sample.	DealScan
Leverage slack	To capture the borrower's distance to a technical default, we calculate leverage slack as the difference between the reported long-term liability (Compustat: DLTT) in the balance sheet from the previous fiscal year (t-1) and the indebtedness negative covenant amount in the debt contract, deflated by the lagged total assets from the fiscal year t-2. The leverage slack ranges from -1 to 0 and decreases in the distance to a technical default. When the difference is at or above zero (i.e., triggering technical default), we set the leverage slack value as zero. We set the leverage slack value as -1 for 941 loans (30 percent of 3,137 loans in our sample) when the contract has no indebtedness negative covenant (suggesting no constraints). The indebtedness negative covenant amount is based on our collected information from EDGAR debt contracts.	EDGAR, Compustat
Capital lease slack	To capture the borrower's distance to a technical default, we calculate capital lease slack as the difference between the reported capital lease (Compustat: DCLO) in the balance sheet from the previous fiscal year (t-1) and the capital lease negative covenant amount in the debt contract, deflated by the lagged total assets from the fiscal year t-2. The capital lease slack ranges from -1 to 0 and decreases in the distance to a technical default. When the difference is at or above zero (i.e., triggering technical default), we set the capital lease slack value as zero. We set the capital lease slack value as -1 for 1,600 loans (51 percent of 3,137 in our sample) when the debt contract has no capital lease negative covenant (suggesting no constraints). The capital lease negative covenant amount is based on our collected information from EDGAR debt contracts.	EDGAR, Compustat
Mention lease	An indicator variable that equals one if a contract discusses "lease" at least once and zero otherwise. The information is based on our collected information from EDGAR debt contracts.	EDGAR
Mention off-balance sheet leases	An indicator variable that equals one if a contract mentions off-balance-sheet leases and zero otherwise. The information is based on our collected information from EDGAR debt contracts.	EDGAR
Amendment	An indicator variable that equals one if a debt contract is an amendment and zero otherwise. The information is based on our collected information from EDGAR debt contracts.	EDGAR
Indebtedness covenant	An indicator variable that equals one if a debt contract has an indebtedness negative covenant and zero otherwise. The information is based on our collected information from EDGAR debt contracts.	EDGAR
Max leverage covenant	An indicator variable that equals one if a debt contract has a maximum leverage ratio covenant and zero otherwise. The information is based on our collected information from EDGAR debt contracts.	EDGAR
Outstanding days	The number of days a contract has been issued. We use the earliest available amendment date if the original contract date is missing. The information is based on our collected information from EDGAR debt contracts.	EDGAR
Deal size in millions	A debt contract's principal amount or face value. If our EDGAR-collected face value is different from the matched record in DealScan, we use the DealScan deal size value (DealScan: DEAL_AMOUNT_CONVERTED).	EDGAR, DealScan
Maturity in months	The number of months from the contract initiation date to the maturity date (DealScan: TENOR_MATURITY).	DealScan

Appendix A Variable Definitions and Data Sources (Cont.)

Variable	Definition	Source
Secured	An indicator variable that equals one for secured debt backed by physical collaterals and zero otherwise (DealScan: SECURED).	DealScan
Num of lead lenders	The number of lead lenders (DealScan: NUMBER_OF_LEAD_ARRANGERS).	DealScan
Num of non-lead lenders	The number of all lenders (DealScan: NUMBER_OF_LENDERS) minus the number of lead lenders (DealScan: NUMBER_OF_LEAD_ARRANGERS).	DealScan
Num of financial covenants	The number of negative financial covenants in the debt contract (DealScan: ALL_COVENANTS_FINANCIAL).	DealScan
Performance pricing provision	An indicator that equals one if the contract includes a performance pricing provision and zero otherwise (DealScan: PERFORMANCE_PRICING_GRID).	DealScan
Estimated operating lease	Borrower's estimated operating lease is the present value of future lease payments, deflated by lagged total assets. The first future years of lease payments are Compustat: MRC1-MRC5. We assume the average maturity for the remaining future lease payment (Compustat: MRCTA) as eight years and use 10 percent as the discount rate.	Compustat
Capital lease	Borrower's capital lease (Compustat: DCLO), deflated by lagged total assets	Compustat
Long-term leverage	Borrower's long-term liabilities (Compustat: DLTT), deflated by lagged total assets	Compustat
Tangible assets	Borrower's property, plant, and equipment net value (Compustat: PPENT), deflated by lagged total assets. PPENT includes capitalized leases, leased assets, and lease improvements when the company is the lessee.	Compustat
Intangible assets	Borrower's intangible assets (Compustat: INTAN), deflated by lagged total assets. INTAN includes leases, lease acquisition costs, and leasehold expenses when the company is the lessee.	Compustat
R&D	Borrower's R&D expense (Compustat: XRD), deflated by lagged total assets. We set the value as zero for firms with missing R&D expense. XRD reflects internally-developed intangible assets.	Compustat
Net rental expense	Borrower's rental expenses (Compustat: XRENT) minus rental income (Compustat: IRENT), deflated by lagged total assets.	Compustat
Borrower size in millions	Borrower's market value of total assets, i.e., the sum of the market value of equity (Compustat: PRCC_F*CSHO) and the book value of debt (Compustat: AT-SEQ).	Compustat
Borrower ROA	Borrower's income before extraordinary items (Compustat: IB), deflated by the average total assets over the last year.	Compustat
Borrower M/B	Borrower's total debt (Compustat: LT) plus the market value of equity (Compustat: PRCC_F*CSHO), deflated by the book value of total assets (Compustat: AT)	Compustat
Zscore	Borrower's Altman's Z-score index, computed as $3.3 \text{ pretax operating income} / \text{total assets} + 0.99 \text{ sales} / \text{total assets} + 1.4 \text{ retained earnings} / \text{total assets} + 1.2 (\text{current assets} - \text{current liabilities}) / \text{total assets} + 0.6 \text{ market value of equity} / \text{total liabilities}$. (Compustat: $=3.3*EBIT/AT+0.99SALE/AT+1.4*RE/AT+1.2*(ACT-LCT)/AT+0.6*MV/LT$)	Compustat
Earning volatility	Borrower's standardized change in earnings. Earnings are income before extraordinary items (Compustat: IB). We calculate the previous five years of the mean value and standard deviation and require at least three years of the change data. The standardized change in earnings is subtracting it from its five-year mean and dividing it by its five-year standard deviation. The standardized change in earnings has a zero mean and unit standard deviation, and it captures the earnings volatility.	Compustat
Book vvalue change volatility	Borrower's standardized change in the book value of equity. The book equity value is Compustat: CEQ + TSTKP - DVPA. We calculate the previous five years of the mean value and standard deviation and require at least three years of the change data. The standardized change in the book equity value is subtracting it from its five-year mean and dividing it by its five-year standard deviation. The standardized change in the book equity value has a zero mean and unit standard deviation, capturing the book equity value's volatility.	Compustat

Table 1 Debt Contract Sample Construction and Description**Panel A Debt Contract Sample Construction**

	Number of Debt Contracts
Debt contracts identified by Python programs from EDGAR between 2014 to 2020	7,878
Delete duplicated debt contracts	7,773
Delete debt contracts without a contract date	7,058
Delete debt contracts that cannot be matched with DealScan	3,415
Delete debt contracts that miss GVKEY and necessary controls in Compustat	3,137

Panel B Description of 7,058 Debt Contracts before Merging with DealScan and Compustat

	Mean	25th	Median	75th	Std
Mention lease	0.86	1.00	1.00	1.00	0.34
Mention off-balance sheet leases	0.71	0.00	1.00	1.00	0.46
Capitalizing off-balance sheet leases	0.27	0.00	0.00	1.00	0.44
Floating GAAP	0.60	0.00	1.00	1.00	0.49
Deal size in millions	889	100	375	1,000	1,889
Outstanding days	525	0	0	887	863
Amendment	0.48	0.00	0.00	1.00	0.50
Indebtedness covenant	0.80	1.00	1.00	1.00	0.40
Max leverage covenant	0.68	0.00	1.00	1.00	0.46

Panel C Description of 3,137 Debt Contracts in the Final Sample

All mean and median values differ significantly (p-value<0.01) from those reported in Panel B.

	Mean	25th	Median	75th	Std
Mention lease	0.97	1.00	1.00	1.00	0.16
Mention off-balance sheet leases	0.87	1.00	1.00	1.00	0.33
Capitalizing off-balance sheet leases	0.36	0.00	0.00	1.00	0.48
Floating GAAP	0.52	0.00	1.00	1.00	0.50
Deal size in millions	1,249	300	700	1,460	2,086
Outstanding days	623	0	0	1,091	898
Amendment	0.55	0.00	1.00	1.00	0.50
Indebtedness covenant	0.85	1.00	1.00	1.00	0.36
Max leverage covenant	0.86	1.00	1.00	1.00	0.35

Table 2 Regression Variable Distributions

The sample includes 3,137 debt contracts with all variables not missing from DealScan or Compustat. We report the raw values in this table, but some variables are taken as a log transformation in the regression analysis (i.e., log of one plus the raw value). Please see Appendix A for variable definitions.

	Mean	25th	50th	75th	Std
Capitalizing off-balance sheet leases	0.36	0.00	0.00	1.00	0.48
Floating GAAP	0.52	0.00	1.00	1.00	0.50
Num of AAER	4.15	1.67	3.50	5.75	3.37
Num of Restatement-Fraud	6.06	2.00	5.00	8.67	5.25
Num of ICW-Fraud	11.17	3.00	7.50	14.81	12.23
Num of Default	42.83	19.00	38.00	61.60	30.22
Num of Restatement-Errors	92.12	40.50	78.00	132.00	67.77
Num of ICW-Errors	242.38	46.00	170.73	414.10	234.81
Lender industry expertise in ratios	0.05	0.01	0.03	0.08	0.07
Lender relationship in loans	1.19	0.50	1.00	2.00	0.98
Lender size in millions	44,354	24,696	41,109	59,246	27,416
Leverage slack	-0.35	-1.00	-0.02	0.00	0.45
Capital lease slack	-0.53	-1.00	-1.00	-0.02	0.48
Mention off-balance sheet leases	0.87	1.00	1.00	1.00	0.33
Amendment	0.55	0.00	1.00	1.00	0.50
Indebtedness covenant	0.85	1.00	1.00	1.00	0.36
Max leverage covenant	0.86	1.00	1.00	1.00	0.35
Outstanding days	623	0	0	1,091	898
Deal size in millions	1,249	300	700	1,460	2,086
Maturity in months	51.46	42.00	60.00	60.00	17.54
Secured	0.41	0.00	0.00	1.00	0.48
Num of lead lenders	3.79	2.00	3.00	5.00	2.94
Num of non-lead lenders	5.36	2.00	4.00	8.00	5.07
Num of financial covenants	0.97	0.00	1.00	2.00	1.03
Performance pricing provision	0.29	0.00	0.00	1.00	0.45
Estimated operating lease	0.06	0.01	0.02	0.05	0.14
Capital lease	0.00	0.00	0.00	0.00	0.02
Long-term leverage	0.34	0.17	0.31	0.46	0.25
Tangible assets	0.29	0.06	0.18	0.44	0.29
Intangible assets	0.27	0.03	0.18	0.44	0.29
R&D	0.02	0.00	0.00	0.01	0.04
Net rental expense	0.01	0.00	0.01	0.02	0.04
Borrower size in millions	19,425	2,037	5,548	15,844	42,325
Borrower ROA	0.04	0.01	0.04	0.07	0.09
Borrower M/B	0.67	0.47	0.66	0.86	0.27
Zscore	2.92	1.26	2.37	3.83	2.78
Earning volatility	0.05	0.01	0.03	0.05	0.08
Book value change volatility	0.16	-0.77	-0.05	0.77	2.77

Table 3 Main Test: Lenders' Past *Accounting-Fraud* Experiences and Whether to Include All Leases in Liability Definition

The dependent variable is whether a contract includes off-balance sheet leases in liability (*Capitalizing off-balance sheet leases*). The log transformation refers to a log of one plus the raw value. Years 2016-2020 are indicative variables. ***, **, * denotes significance levels at 1%, 5%, and 10% respectively based on a two-tailed test. Standard errors are clustered based on the SIC four-digit industry classification. Please refer to Appendix A for variable definitions.

	Regression:			OLS			Logistic			
	Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year 2016		-0.035	-0.048*	-0.043	0.005	-0.020	-0.015	-0.204	-0.272	-0.248
Year 2017		-0.060**	-0.070**	-0.090***	-0.022	-0.038	-0.049	-0.327**	-0.371**	-0.517***
Year 2018		-0.062**	-0.072**	-0.075**	-0.040	-0.055*	-0.054*	-0.377**	-0.425**	-0.458***
Year 2019		-0.031	-0.017	-0.014	-0.002	-0.000	0.003	-0.184	-0.103	-0.080
Year 2020		-0.021	-0.027	-0.012	0.010	-0.004	0.009	-0.176	-0.218	-0.138
Log (Num of AAER)		0.042***			0.027**			0.249***		
Log (Num of Restatement-Fraud)			0.045***			0.033**			0.244***	
Log (Num of ICW-Fraud)				0.037***			0.025**			0.224***
Lender industry expertise		0.010	0.010	0.009	0.005	0.003	0.002	-0.011	-0.011	-0.013
Log (Lender relationship)		-0.004	-0.007	-0.003	0.004	0.001	0.004	-0.057	-0.065	-0.052
Log (Lender size)		-0.010*	-0.011**	-0.011*	-0.005	-0.005	-0.004	-0.069*	-0.078**	-0.081**
Leverage slack		0.006	0.008	0.008	-0.006	-0.005	-0.004	0.008	0.019	0.014
Capital lease slack		0.053**	0.053**	0.052**	0.076*	0.077*	0.077*	0.249*	0.256*	0.256*
Mention off-balance sheet leases		0.092***	0.095***	0.093***	0.098**	0.098**	0.097**	17.138	16.646	15.899
Amendment		-0.009	-0.011	-0.010	-0.023	-0.020	-0.020	0.088	0.092	0.085
Indebtedness covenant		0.027	0.025	0.027	0.013	0.013	0.014	0.101	0.093	0.100
Max leverage covenant		0.287***	0.284***	0.286***	0.280***	0.281***	0.282***	3.722***	3.705***	3.748***
Log (Outstanding days)		0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.007	0.007
Log (Deal size)		0.006	0.004	0.004	0.005	0.005	0.006	-0.011	-0.026	-0.024
Log (Maturity)		-0.015	-0.013	-0.015	-0.017	-0.017	-0.017	-0.137	-0.135	-0.146
Secured		-0.063***	-0.066***	-0.067***	-0.041	-0.043*	-0.043*	-0.271**	-0.292**	-0.298**
Num of lead lenders		-0.087***	-0.091***	-0.092***	-0.080**	-0.082**	-0.081**	-0.436***	-0.453***	-0.464***
Num of non-lead lenders		0.022*	0.021*	0.022**	0.007	0.006	0.007	0.128*	0.124*	0.132*

Num of financial covenants	0.014	0.015	0.015	-0.000	0.001	0.000	0.015	0.019	0.020
Performance pricing provision	0.017	0.020	0.018	0.027	0.027	0.026	0.114	0.122	0.113
Estimated operating lease	0.056	0.052	0.039	-0.016	-0.012	-0.020	0.023	0.003	-0.069
Capital lease	0.230	0.234	0.244	0.381	0.387	0.388	2.334	2.301	2.412
Long-term leverage	-0.244***	-0.242***	-0.240***	-0.229***	-0.230***	-0.228***	-1.502***	-1.466***	-1.458***
Tangible assets	0.196***	0.198***	0.195***	0.195***	0.196***	0.193***	1.161***	1.168***	1.170***
Intangible assets	0.110***	0.112***	0.109***	0.117***	0.117***	0.115***	0.671***	0.672***	0.661***
R&D	-0.003	-0.006	-0.006	0.060	0.064	0.059	-2.029	-2.085	-2.113
Net rental expense	-1.186***	-1.203***	-1.168***	-1.078***	-1.095***	-1.061***	-5.596***	-5.732***	-5.616***
Log (Borrower size)	-0.022**	-0.020*	-0.022**	-0.007	-0.006	-0.007	-0.170***	-0.159**	-0.170***
Borrower ROA	-0.009	-0.015	-0.016	0.014	0.016	0.014	-0.407	-0.429	-0.440
Borrower M/B	0.010	0.009	0.010	0.001	0.000	0.000	0.115**	0.109**	0.112**
Zscore	0.000	0.001	0.001	0.005	0.005	0.005	-0.002	0.001	0.000
Earning volatility	0.090	0.095	0.095	0.068	0.071	0.072	0.627	0.649	0.653
Book value change volatility	0.004	0.004	0.004	0.002	0.002	0.002	0.021	0.021	0.020
Lender FE	No	No	No	Yes	Yes	Yes	No	No	No
Borrower Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Borrower Credit Rating FE	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Loan Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared (Chi-square Prob for the Logistic regression)	0.242	0.244	0.244	0.277	0.277	0.277	0.000	0.000	0.000
Number of Debt Contracts	3137	3137	3137	3137	3137	3137	2695	2695	2695

Table 4 Placebo Test: Lenders' Past *Non-Accounting-Fraud* Experiences and Whether to Include All Leases in Liability

The dependent variable is whether a contract includes off-balance-sheet leases in liability (*Capitalizing off-balance sheet leases*). The log transformation refers to a log of one plus the raw value. Years 2016-2020 are indicative variables. ***, **, * denotes significance levels at 1%, 5%, and 10% respectively based on a two-tailed test. Standard errors are clustered based on the SIC four-digit industry classification. Please refer to Appendix A for variable definitions.

	Regression:			OLS			Logistic			
	Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year 2016		-0.029	-0.030	-0.028	-0.003	-0.004	-0.003	-0.158	-0.172	-0.150
Year 2017		-0.041	-0.042	-0.043	-0.015	-0.015	-0.015	-0.221	-0.226	-0.225
Year 2018		-0.045	-0.045	-0.047*	-0.033	-0.033	-0.033	-0.275*	-0.278*	-0.285*
Year 2019		-0.009	-0.009	-0.014	0.005	0.005	0.005	-0.053	-0.053	-0.074
Year 2020		-0.006	-0.008	-0.013	0.010	0.010	0.010	-0.088	-0.097	-0.125
Log (Num of Default)		0.012			-0.000			0.071		
Log (Num of Restatement-Errors)			0.013			0.001			0.087	
Log (Num of ICW-Errors)				0.006			-0.000			0.024
Lender industry expertise		0.007	0.006	0.013	0.005	0.005	0.005	-0.020	-0.029	0.002
Log (Lender relationship)		0.005	0.004	0.008	0.011	0.011	0.011	-0.001	-0.011	0.022
Log (Lender size)		-0.007	-0.007	-0.008	0.001	0.000	0.001	-0.050	-0.058	-0.049
Leverage slack		0.007	0.007	0.007	-0.005	-0.005	-0.005	0.005	0.006	0.007
Capital lease slack		0.051**	0.052**	0.053**	0.075*	0.075*	0.075*	0.247*	0.248*	0.254*
Mention off-balance sheet leases		0.095***	0.095***	0.095***	0.098**	0.098**	0.098**	16.635	17.135	17.128
Amendment		-0.011	-0.010	-0.011	-0.020	-0.020	-0.020	0.075	0.081	0.071
Indebtedness covenant		0.028	0.028	0.028	0.014	0.014	0.014	0.114	0.112	0.118
Max leverage covenant		0.284***	0.283***	0.284***	0.281***	0.281***	0.281***	3.691***	3.685***	3.698***
Log (Outstanding days)		0.003	0.003	0.003	0.004	0.004	0.004	0.007	0.006	0.007
Log (Deal size)		0.006	0.006	0.007	0.007	0.007	0.007	-0.011	-0.012	-0.005
Log (Maturity)		-0.015	-0.014	-0.015	-0.016	-0.016	-0.016	-0.130	-0.128	-0.128
Secured		-0.064***	-0.064***	-0.063***	-0.041	-0.041	-0.041	-0.280**	-0.279**	-0.283**
Num of lead lenders		-0.087***	-0.088***	-0.085***	-0.079**	-0.079**	-0.079**	-0.435***	-0.442***	-0.420***
Num of non-lead lenders		0.023**	0.023**	0.024**	0.007	0.007	0.007	0.134*	0.132*	0.136*

Num of financial covenants	0.012	0.013	0.012	-0.002	-0.002	-0.002	0.012	0.013	0.012
Performance pricing provision	0.016	0.016	0.016	0.025	0.025	0.025	0.101	0.103	0.099
Estimated operating lease	0.048	0.050	0.051	-0.014	-0.014	-0.014	-0.005	0.009	0.011
Capital lease	0.244	0.246	0.230	0.379	0.380	0.379	2.394	2.434	2.298
Long-term leverage	-0.244***	-0.243***	-0.243***	-0.229***	-0.229***	-0.229***	-1.507***	-1.509***	-1.503***
Tangible assets	0.193***	0.192***	0.193***	0.192***	0.192***	0.192***	1.152***	1.155***	1.147***
Intangible assets	0.109***	0.109***	0.109***	0.116***	0.116***	0.116***	0.662***	0.667***	0.659***
R&D	0.002	-0.003	-0.004	0.054	0.055	0.054	-2.028	-2.022	-2.007
Net rental expense	-1.159***	-1.170***	-1.167***	-1.054***	-1.055***	-1.053***	-5.566***	-5.628***	-5.616***
Log (Borrower size)	-0.022**	-0.022**	-0.022**	-0.008	-0.008	-0.008	-0.169***	-0.169***	-0.168***
Borrower ROA	-0.013	-0.014	-0.009	0.015	0.015	0.015	-0.408	-0.400	-0.406
Borrower M/B	0.010	0.010	0.010	0.001	0.001	0.001	0.114**	0.114**	0.112**
Zscore	0.001	0.001	0.001	0.005	0.005	0.005	-0.000	-0.001	0.002
Earning volatility	0.092	0.095	0.085	0.065	0.066	0.065	0.610	0.630	0.576
Book value change volatility	0.004	0.004	0.004	0.003	0.003	0.003	0.022	0.022	0.023
Lender FE	No	No	No	Yes	Yes	Yes	No	No	No
Borrower Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Borrower Credit Rating FE	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Loan Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared (Chi-square Prob for the Logistic regression)	0.240	0.241	0.240	0.276	0.276	0.276	0.000	0.000	0.000
Number of Debt Contracts	3137	3137	3137	3137	3137	3137	2695	2695	2695

Table 5 Different Decision: Lenders' Past *Accounting-Fraud* Experiences and Whether to Adopt ASC 842 (Floating GAAP)

The dependent variable is whether a contract adopts the new lease accounting standard, ASC 842 (*Floating GAAP*). The log transformation refers to a log of one plus the raw value. Years 2016-2020 are indicative variables. ***, **, * denotes significance levels at 1%, 5%, and 10% respectively based on a two-tailed test. Standard errors are clustered based on the SIC four-digit industry classification. Please refer to Appendix A for variable definitions.

	Regression:			OLS			Logistic			
	Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year 2016		-0.017	-0.014	-0.007	-0.047	-0.036	-0.026	-0.105	-0.094	-0.056
Year 2017		0.004	0.002	0.042	-0.022	-0.022	0.014	0.028	0.019	0.211
Year 2018		0.020	0.019	0.038	0.004	0.005	0.024	0.076	0.070	0.161
Year 2019		0.012	-0.003	-0.002	-0.017	-0.022	-0.020	0.042	-0.020	-0.017
Year 2020		0.052	0.051	0.045	0.030	0.033	0.031	0.272	0.267	0.243
Log (Num of AAER)		-0.036*			-0.022			-0.150*		
Log (Num of Restatement-Fraud)			-0.022			-0.009			-0.096	
Log (Num of ICW-Fraud)				-0.039***			-0.030***			-0.183***
Lender industry expertise		0.006	0.006	0.008	0.025	0.026	0.028	0.030	0.030	0.037
Log (Lender relationship)		0.031	0.027	0.033	-0.002	-0.005	0.001	0.147	0.132	0.163
Log (Lender size)		-0.005	-0.006	-0.002	-0.002	-0.005	-0.001	-0.015	-0.021	-0.002
Leverage slack		0.023	0.022	0.021	0.041	0.041	0.040	0.127	0.121	0.116
Capital lease slack		-0.003	-0.003	-0.003	-0.018	-0.018	-0.020	-0.021	-0.021	-0.017
Mention off-balance sheet leases		-0.287***	-0.290***	-0.288***	-0.296***	-0.296***	-0.295***	-1.479***	-1.482***	-1.473***
Amendment		-0.013	-0.011	-0.012	0.029	0.027	0.026	-0.076	-0.067	-0.071
Indebtedness covenant		-0.017	-0.017	-0.017	0.002	0.001	0.001	-0.063	-0.064	-0.067
Max leverage covenant		0.168***	0.171***	0.168***	0.195***	0.195***	0.193***	0.877***	0.886***	0.872***
Log (Outstanding days)		-0.003	-0.003	-0.003	-0.007	-0.006	-0.006	-0.015	-0.018	-0.017
Log (Deal size)		0.030*	0.031*	0.032**	0.016	0.016	0.017	0.155**	0.158**	0.165**
Log (Maturity)		-0.019	-0.020	-0.018	-0.015	-0.016	-0.014	-0.116	-0.118	-0.109
Secured		-0.029	-0.027	-0.025	-0.040	-0.039	-0.037	-0.114	-0.108	-0.100
Num of lead lenders		0.061**	0.062**	0.066**	0.037	0.037	0.038	0.302***	0.305***	0.320***
Num of non-lead lenders		-0.037**	-0.038***	-0.037**	-0.027*	-0.027*	-0.027*	-0.164***	-0.166***	-0.166***

Num of financial covenants	-0.025	-0.025	-0.027	-0.015	-0.014	-0.016	-0.123	-0.123	-0.130
Performance pricing provision	0.030	0.030	0.030	0.023	0.024	0.024	0.143	0.139	0.137
Estimated operating lease	-0.212	-0.207	-0.196	-0.101	-0.104	-0.096	-1.093*	-1.088*	-1.030*
Capital lease	0.665**	0.664**	0.650**	0.488	0.488	0.479	2.613	2.553	2.584
Long-term leverage	0.079	0.078	0.076	0.111*	0.112*	0.110*	0.382	0.378	0.358
Tangible assets	-0.004	-0.003	-0.004	-0.015	-0.013	-0.014	-0.016	-0.014	-0.013
Intangible assets	-0.080	-0.080	-0.080	-0.111*	-0.110*	-0.109*	-0.400**	-0.402**	-0.395**
R&D	0.170	0.173	0.173	0.076	0.078	0.074	0.536	0.551	0.554
Net rental expense	0.739*	0.736*	0.727	0.538	0.530	0.527	3.522*	3.537*	3.480*
Log (Borrower size)	-0.004	-0.005	-0.004	-0.003	-0.003	-0.004	-0.047	-0.050	-0.045
Borrower ROA	0.110	0.114	0.116	0.034	0.032	0.033	0.350	0.369	0.371
Borrower M/B	0.006	0.007	0.007	0.003	0.003	0.004	0.027	0.029	0.029
Zscore	-0.007	-0.008	-0.007	-0.008	-0.008	-0.008	-0.037	-0.039	-0.038
Earning volatility	-0.165	-0.166	-0.171	-0.237	-0.236	-0.243	-0.715	-0.730	-0.752
Book value change volatility	-0.004	-0.004	-0.004	-0.000	-0.000	-0.000	-0.018	-0.018	-0.018
Lender FE	No	No	No	Yes	Yes	Yes	No	No	No
Borrower Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Borrower Credit Rating FE	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Loan Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared (Chi-square Prob for the Logistic regression)	0.261	0.260	0.263	0.241	0.240	0.242	0.000	0.000	0.000
Number of Debt Contracts	3137	3137	3137	3137	3137	3137	2695	2695	2695

Table 6 Time-Series and Cross-Sectional Analysis

We augment Table 3's Models 1-3 by adding the partitioning variable and its interaction term with creditors' past accounting fraud experience and report only the interaction term's coefficient for brevity. The sample includes 3,137 debt contracts. Borrower industry, borrower credit rating, and loan type fixed effects are included. ***, **, * denotes significance levels at 1%, 5%, and 10% respectively based on a two-tailed test. Standard errors are clustered based on the SIC four-digit industry classification.

Panel A Post ASU 2016-02

Years 2017-28 is a dichotomous variable that equals one for 2017 and 2018 and zero otherwise.

	(1)	(2)	(3)
Log (Num of AAER) × Years 2017-18	0.036		
Log (Num of Restatement-Fraud) × Years 2017-18		0.008	
Log (Num of ICW-Fraud) × Years 2017-18			-0.005
Adj. R-squared	0.243	0.244	0.243

Panel B Past Borrower-Lender Relationship

D (Lender Relationship) is a dichotomous variable that equals one for contracts with the *Lender Relationship* value exceeding the annual median and zero otherwise. *Lender Relationship* is the number of loans a lead lender initiated with the examined borrower five years before the debt contract date. We take a simple average across lead lenders when there is more than one lead lender.

	(1)	(2)	(3)
Log (Num of AAER) × D (Lender Relationship)	-0.037*		
Log (Num of Restatement-Fraud) × D (Lender Relationship)		-0.009	
Log (Num of ICW-Fraud) × D (Lender Relationship)			-0.030**
Adj. R-squared	0.242	0.243	0.243

Panel C Secured Debt

D (Secured Debt) is a dichotomous variable that equals one if a contract is backed by physical collaterals (*Secured*) and zero otherwise.

	(1)	(2)	(3)
Log (Num of AAER) × D (Secured Debt)	-0.012		
Log (Num of Restatement-Fraud) × D (Secured Debt)		-0.034**	
Log (Num of ICW-Fraud) × D (Secured Debt)			-0.029**
Adj. R-squared	0.242	0.243	0.243

Table 6 Time-Series and Cross-Sectional Analysis (Cont.)

We augment Table 3's Models (1)-(3) by adding the partitioning variable and its interaction term with creditors' past accounting fraud experience and report only the interaction term's coefficient for brevity. The sample includes 3,137 debt contracts. Borrower industry, borrower credit rating, and loan type fixed effects are included. ***, **, * denotes significance levels at 1%, 5%, and 10% respectively based on a two-tailed test. Standard errors are clustered based on the SIC four-digit industry classification.

Panel D High Amount of Borrower Estimated Operating Lease

D (Estimated operating lease) is a dichotomous variable that equals one for contracts when the borrower's *Estimated Operating Lease* value exceeds the annual median and zero otherwise. The borrower's estimated operating lease is the present value of future lease payments, deflated by lagged total assets. The first future years of lease payments are Compustat: MRC1-MRC5. We assume the average maturity for the remaining future lease payment (Compustat: MRCTA) as eight years and use 10 percent as the discount rate.

	(1)	(2)	(3)
Log (Num of AAER) × D (Estimated Operating Lease)	0.054*		
Log (Num of Restatement-Fraud) × D (Estimated Operating Lease)		0.038**	
Log (Num of ICW-Fraud) × D (Estimated Operating Lease)			0.036**
Adj. R-squared	0.245	0.245	0.245

Panel E: Many Financial Covenants in the Contract

D (Financial Covenants) is a dichotomous variable that equals one for contracts when the *Num of Financial Covenants* exceeds the annual median and zero otherwise.

	(1)	(2)	(3)
Log (Num of AAER) × D (Financial Covenants)	0.037**		
Log (Num of Restatement-Fraud) × D (Financial Covenants)		0.042**	
Log (Num of ICW-Fraud) × D (Financial Covenants)			0.046***
Adj. R-squared	0.243	0.244	0.245