

Do Lenders Uniformly Capitalize Operating Leases in Debt Covenants?

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This study investigates whether lenders capitalize operating leases uniformly when defining debt covenants. The purpose is to understand whether operating lease characteristics are correlated with debt covenant choices to make inferences regarding lenders' demand for lease accounting rules. Using a hand-collected sample of lending agreements from firms that use operating leases extensively, I find a positive association between the probability of lenders capitalizing operating leases into debt covenants and the duration of borrowers' lease contracts. The results indicate that lenders discriminate among operating leases when designing debt covenants and suggest that operating leases vary in their effect on credit risk.

INTRODUCTION

Recent changes to lease accounting standards revolved around the extent to which leases should be capitalized on the balance sheet. Lease contracts vary substantially in nature from equipment rentals to land and office buildings and characteristics including lease term, renewal options, and residual value guarantees. Standard setters promulgated divergent standards and financial statement users and preparers disagreed on the details of the financial reporting treatment of leases.¹ The purpose of this study is to examine the relation between operating lease characteristics and contractual definitions of lease-related financial covenants in private lending contracts to provide empirical evidence regarding whether lenders treat operating leases equally or differently in debt covenants based on operating lease characteristics.

The FASB's new lease standard issued in 2016 replaces the decades-old standard (ASC 840 or SFAS 13) that specified bright-line thresholds to partition leases into capital or operating leases for financial reporting.² The leasing industry evolved based on these thresholds with lease contracts becoming increasingly more complex to achieve operating lease classification, which avoids recognition of the leases on the balance sheet (Imhoff, Lipe, & Wright, 1991). Prior research in lease accounting indicates that credit market participants account for operating leases in credit ratings (e.g., Kraft, 2012) and that private lenders do not price operating leases uniformly (Altamuro, Johnston, Pandit, & Zhang, 2014). Similar to Altamuro et al. (2013), I expect banks to adjust for operating leases on a case-by-case basis depending on lease characteristics. However, I consider how lenders incorporate lease heterogeneity into debt covenant definitions. Prior research argues for the unique role of debt covenants for monitoring (see, e.g., Tirole, 2006; Chava and Roberts, 2008) and finds evidence consistent with the distinctive role of debt covenants in the context of lease accounting (Graden, 2018). Understanding whether leases are given equal treatment for debt covenants is important because debt covenants mitigate *unexpected* wealth transfers from debt holders to shareholders (e.g., Jensen and Meckling, 1976; Tirole, 2006). In this paper,

I study the association between operating lease characteristics and the likelihood that lenders capitalize or adjust for operating leases for debt covenant calculations (i.e., non-GAAP adjustments) to provide empirical evidence of lenders' demand for contractible measures of leasing activity.

From a contracting perspective, lenders have incentive to mitigate circumstances that lower the value of the debt. Lease contracts, if structured in the right way, may affect the value of lenders' claims due to the effect of lease terms on the lenders' ultimate priority in bankruptcy. Bankruptcy courts treat leases as either executory contracts (i.e., administrative expenses) or security interests (UCC, n.d.).³ How bankruptcy courts characterize leases affects the priority of payments in arrears and distributions from the bankruptcy estate to creditors (Oei, 2008). If the court rules a lease as an executory contract and the lessee chooses to continue using the leased asset (i.e., the lessee "assumes" the lease), the lessor has a priority claim to payments in arrears.⁴ Alternatively, if the court rules a lease as a security interest, then lessors are ranked with creditors on a *pro rata* basis implying that existing creditors' claims may be diluted with the influx of lessors as additional claimants of the bankruptcy estate (Eisfeldt & Rampini, 2009). These stylized facts from the bankruptcy code provide a setting to test lenders' incentives to incorporate operating leases into debt covenants depending on underlying lease characteristics. Both cases above predict a higher probability of loss conditional on bankruptcy. Because of the unique role covenants play in protecting creditors, I predict that leases with greater risk of being assumed by the lessee or being characterized by the bankruptcy court as security interests are associated with a higher probability of lenders capitalizing operating leases in financial covenants.

Practitioners and regulators argue that the leasing industry has evolved substantially since the promulgation of SFAS 13 in 1976. Particularly, operating lease agreements are much more prevalent in recent years and have become more complex (e.g., Imhoff Jr., Lipe, and Wright, 1991; Securities and Exchange Commission (SEC), 2005). I hand-collected a sample of private debt contracts from 2008 to 2011 and determine how lenders adjust for borrowers' operating leases. Multivariate analyses show a significant positive relation between a proxy for lease contract duration and the probability of the lending contract capitalizing operating leases (i.e., non-gaap adjustments).⁵ The evidence suggests that lenders are aware of variation in lease terms and account for these terms when writing covenants. While the sample size and infrequent nature of other lease characteristics such as guaranteed residual value leases yield no significant associations with non-gaap covenant adjustments for operating leases, the findings provide modest evidence that lenders do not uniformly capitalize operating leases. These results provide empirical evidence of the nature of lenders' demand for lease accounting rules.

This study contributes to several areas of the accounting literature including research on lease accounting rules and debt contract design. First, FASB's exposure draft capitalizes nearly all lease transactions with the intent of improving the financial reporting transparency of leases. Prior research, however, documents differences among financial statement user groups' treatment of operating leases. Extant studies generally find that equity investors capitalize all operating leases (Lipe, 2001). In contrast to equity investors, Altamuro et al. (2013) find evidence suggesting that lenders discriminate among operating leases when setting loan spreads. In contrast with the proposed lease accounting standard, my findings suggest that lenders do not uniformly capitalize operating leases when writing debt covenants.

Second, I provide an additional explanation of lenders' demand for accounting rules—bankruptcy costs. The evidence is consistent with lenders avoiding bankruptcy-related costs by selectively capitalizing operating leases based on lease characteristics. Prior studies suggest that bankruptcy rules affect lessors' right of repossession (Eisfeldt & Rampini, 2009), the price of private loans (Altamuro et al., 2014), and debt-market participants' sensitivity to purchase obligations relative to operating leases (Andrade, Henry, & Nanda, 2014). The findings of this paper indicate that bankruptcy rules affect private lenders' incentives to adjust for operating leases in debt covenants.

Finally, I contribute to studies of debt contract design. The debt contract design literature explores detailed contractual features documenting how lenders use accounting information in the contracting setting. Early studies investigate features of bond covenants (Leftwich, 1983; Smith & Warner, 1979). Recent studies investigate contracting changes around mandatory accounting pronouncements (e.g., Frankel, Seethamraju, and Zach, 2008; Ball, Li, and Shivakumar, 2013) and investigate trends toward

income-statement based financial covenants that are associated with increased application of fair value accounting (e.g., Li, 2010; Demerjian, 2011; Li, 2012). These studies provide evidence consistent with fair value adjustments and transitory accruals diminishing the value of GAAP for debt contracting. My findings document how lenders use current GAAP rules to incorporate leases into financial covenants and provide evidence of the nature of lenders' demand for lease accounting rules in the context of writing financial covenants.

BACKGROUND AND HYPOTHESES

Distinguishing Among Lease Types

The distinction between capital and operating leases was at the heart of opposing views towards financial reporting for leases. SFAS 13 partitions leases according to four bright-line criteria based on lease contract terms. While the FASB and IASB generally agreed that the right to use an asset has value that should be recognized on the face of the balance sheet, the boards had disagreements during the standard-setting process and clearly diverged in the final standards relative to the income recognition model. For example, "the two boards came to different conclusions in preliminary votes on financial reporting guidance for lessees and for lessors. The boards will meet again...in an effort to resolve their differences and move forward together with the difficult project, which was first placed on their agendas in 2006 (Tysiac, 2014)." Financial statement users expressed concern that the FASB's first Exposure Draft from August 2010 did not properly account for differences between real estate and equipment leases. Accordingly, in a second Exposure Draft issued in May 2013, the FASB proposed a "dual approach" of financial reporting treatment effectively differentiating between real estate leases and all other leases. The standard-setting process for leases lasted nearly a decade, and the quantity and divided nature of feedback from comment letters indicates the difficulty of how to draw the line between leases that represent assets financed with debt and leases that do not. The objective of this study is to provide empirical evidence based on SFAS 13 financial reporting standards of how lenders draw the line between capital and operating leases when writing debt covenants.

Bankruptcy Treatment: True Leases or Security Interests

One of the principal reasons lenders are likely to avoid a "one-size-fits all" method to account for leases relates to how leases are treated in bankruptcy. Bankruptcy courts refer to leases as either true leases or (disguised) security interests.⁶ True leases are treated as executory contracts (i.e., administrative claims) in bankruptcy that are either assumed or rejected by the debtor or trustee (i.e., the lessee), subject to court approval (UCC, n.d.). If the lessee assumes a lease, the lessee is allowed to continue to make payments and maintain possession or use of the leased asset. However, the lessee must cure any defaults on lease payments in arrears. In the legal literature, lessees are required to "cure and assure" meaning that to continue the use of a leased asset, the lessee must pay the lessor any payments in arrears or provide adequate guarantee that payments will be made. These payments to cure receive priority treatment over creditors who are not allowed repossession of leased assets due to the automatic stay imposed by the bankruptcy court and who must wait until the reorganization plan under Chapter 11 is implemented to receive a *pro rata* share of the bankruptcy estate (Ayer, Bernstein, & Friedland, 2004). Thus, lease payments in arrears receive priority over lenders' claims.⁷ Leases ruled by the court to be security interests receive the same treatment as other financing arrangements: leased assets become part of the bankruptcy estate subject to automatic stay and lessors fall in line with other creditors for repayment (Krishnan & Moyer, 1994). Legal research notes that determining the character of lease transactions occurs frequently in bankruptcy courts and has significant ramifications for lessees, lessors, and creditors (Abatemarco & Sabino, 2008; Oei, 2008). In essence, a borrower with leases that are reported as operating leases for financial statements may be deemed by the bankruptcy court to be (disguised) security interests in which case a lenders' share of the bankruptcy estate is diluted by the addition of lessors who receive their pro rata share alongside lenders. Hence, I expect that lenders selectively adjust for leases in debt covenants based on potential bankruptcy costs:

H1: Lenders are more likely to make non-GAAP covenant adjustments related to operating leases when the lease is likely to be treated as a security interest by the court.

RESEARCH DESIGN

The hypothesis predicts that lenders are more likely to capitalize a borrower's operating leases when the leases have characteristics that increase the probability of being characterized as security interests by the bankruptcy court. To test this hypothesis, I employ the following model:

$$Nongaap_{i,j,t} = \beta_0 + \beta_1 Lease_term_{i,t} + \beta_2 Lease_intensity_{i,t} + \sum \beta_i Loan\text{-}level\ controls + \sum \beta_i Borrower\text{-}level\ controls + \varepsilon_{i,t} \quad (1)$$

where the dependent variable, *Nongaap*, is an indicator variable equal to one if firm *i*'s contract *j* starting in year *t* capitalizes operating leases into financial covenants and zero otherwise. The explanatory variable of interest is *Lease_term*. SFAS 13 specifies four criteria to determine the classification of a lease. One of these criteria compares the length of the lease term to the useful life of the leased asset. The longer the lease term relative to the useful life of the asset, the more the leasing agreement is like a financed purchase (rather than a rental). Because I do not have access to lease agreements and lease contract terms, I use disclosed future minimum lease payments to derive a measure to proxy for the duration of a firm's leases. SFAS 13 disclosure rules require a schedule of future minimum lease payments five years from the balance sheet date with an aggregate amount of all future minimum lease payments thereafter.

Consistent with prior studies (e.g., Altamuro et al., 2013; Andrade et al., 2014) and the Standard & Poor's method of capitalizing operating leases (Standard & Poor's, 2013), I measure *Lease_term* as the sum of five years plus the ratio of i) the lump sum of future minimum lease payments more than five years into the future (i.e., *Thereafter Portion*) divided by ii) the year t+5 future minimum lease payment (*Year 5 MLP*) as in the formula below:

$$Lease_term = 5 + \frac{(Thereafter\ Portion)}{(Year\ 5\ MLP)} \quad (2)$$

This measure provides an indication of how many years into the future the firm has lease obligations. The *Lease_term* measure imposes a straight-line assumption into the calculation meaning that firms having a larger lump sum of lease obligations (i.e., the *thereafter* portion) relative to year 5 minimum lease payments are classified as having longer-term leases. I further assume that longer-term leases are more likely to have debt-like characteristics which lenders have greater incentive to capitalize.⁸ Thus, I predict a positive relation between *Lease_term* and *Nongaap* (i.e., $\beta_1 > 0$).

The next set of tests examines additional measures of lease characteristics and the probability of capitalization into debt covenants:

$$Nongaap_{i,j,t} = \beta_0 + \beta_1 Retail_i + \beta_2 RP_resid_synth_{i,t} + \beta_3 Distress_{i,t} + \sum \beta_i Loan\text{-}level\ controls + \sum \beta_i Borrower\text{-}level\ controls + \varepsilon_{i,t} \quad (3)$$

In this model, I measure lease characteristics following Altamuro et al. (2013). The authors find evidence that firms in the retail industry, firms with related party leases or leases with guaranteed residual value, and distressed firms have incremental explanatory power for loan interest rates. These measures provide proxies of lease characteristics to capture lenders' incentives to adjust financial covenants. Altamuro et al. (2013) find evidence that operating leases of retail-industry firms resemble rentals (i.e., true leases). To proxy for leases that resemble rentals, I use an industry-based indicator variable, *Retail*, for firms in the Fama-French 48 Retail Industry classification. If lenders selectively capitalize operating leases that are in substance closer to economic liabilities, I expect that lenders are less likely to make adjustments for firms in the retail industry and predict a negative sign for β_1 .⁹

The next proxy, *RP_resid_synth*, captures lease characteristics that increase the likelihood that the bankruptcy court will recharacterize the lease from an operating lease to a security interest. Leases to related parties and leases with residual value guarantees are more likely to represent liabilities to the lessee and to be viewed as security interests by the bankruptcy court. In addition, leases characterized as synthetic leases are treated as security interests by the bankruptcy court. Synthetic leases represent a unique class of leases that are not distinguished separately from operating leases for financial reporting but have contract features that resemble economic liabilities such as balloon payments and residual value guarantees that leave the lessee ultimately responsible for the risks and rewards associated with asset ownership (Evans, 1996). Moreover, synthetic lease financing arrangements require no down payments and require interest-only payments—thus, mechanical capitalization of the lease payments for these lease arrangements understates the future cash outflow due at the end of the synthetic lease term (Altamuro, 2006; Zechman, 2010). Bankruptcy court cases note a precedent of characterizing synthetic leases as security interests.¹⁰ Thus, synthetic leases represent instances in which lenders have incentive to monitor borrower leases by capitalizing operating leases. To measure related party leases, residual value guarantees leases, and synthetic leases, I search SEC filings using 10-K Wizard.¹¹ Because related party, guaranteed residual value, and synthetic leases occur infrequently in the sample but have the same empirical prediction, I combine the measures into one variable *RP_resid_synth* equal to one if a borrower discloses a related party, guaranteed residual value, or synthetic lease and zero otherwise.¹² I expect a positive sign for β_2 indicating that lenders are more likely to make non-GAAP adjustments when borrowers have leases with these attributes.

Finally, Altamuro et al. (2013) predict that lenders have greater incentive to account for operating leases when the borrower is distressed. To capture distressed borrowers, I calculate z-scores for each four-digit SIC year during the sample period and define *Distressed* equal to one if the borrower has a z-score above the industry-year median and zero otherwise. The hypothesis predicts a positive sign for β_3 indicating that lenders are more likely to make non-GAAP adjustments when firms are distressed.

SAMPLE SELECTION AND RESULTS

Sample Selection and Descriptive Statistics

To select the sample, I begin with all deals in the *Dealscan* database. I limit the sample to completed deals denominated in U.S. Dollars that contain leverage, debt-to-earnings, fixed charge coverage, and interest coverage debt covenants as these covenants are most likely to be modified by lenders to include operating leases. I then merge the *Dealscan* data into *Compustat* for all firms with available gvkey matches.¹³ Using *Compustat* data on the disclosed future minimum lease payments relating to operating leases, I restrict the sample to firms having a ratio of present value of operating leases to total assets of 20 percent or greater.¹⁴ Isolating firms that have relatively large amounts of operating leases provides a sample where off-balance-sheet leases play a significant role in the financing of the firm and are most likely to affect contracting incentives. In other words, if lenders make any adjustments for operating leases, I expect the adjustments to be most prevalent in firms with a significant number of operating leases.

Using these sample selection criteria, I hand collect all available lending agreements from 2008 to 2011. This sample period is well suited to providing evidence about how lenders distinguish among operating leases. First, the leasing industry has evolved since the passage of Statement of Financial Accounting Standards 13: *Accounting for Leases* (SFAS 13). It is widely cited both in academic literature and among practitioners that firms structure transactions to achieve operating-lease financial reporting. Second, operating leases have not only become more prevalent but they have also become more complex (e.g., Imhoff Jr., Lipe, and Wright, 1991; Securities and Exchange Commission (SEC), 2005). For example, the innovation of synthetic leases, which are reported as operating leases, are specially structured leases involving special-purpose entities and specific contractual terms to meet operating lease requirements for financial reporting while concurrently meeting tax requirements to classify the transaction as a capital lease for tax purposes to provide the lessee with an additional tax shield. A recent

sample is beneficial in informing standard setters whether current contracting practices treat operating leases equally. Based on the sample selection criteria, the final sample of firms with available firm-level and contract-level data is 111 lending agreements.

Table 1 reports time, industry, and covenant distributions for the sample contracts and firms. Panel A documents that the distribution of contracts by year is relatively stable across time. Panel B highlights the industry concentration of my sample firms particularly in the retail industry with 60 percent of sample firms classified as retailers which is consistent with prior lease accounting studies. Finally, Panel C tabulates the distribution of covenant types. Lenders capitalize operating leases into two types of covenants: leverage covenants and debt-to-earnings covenants. Leverage covenants occur in 16 percent of the sample and debt-to-earnings covenants occur in 84 percent of the sample.¹⁵ Lenders capitalize operating leases in 36 percent of leverage covenants and 71 percent of debt-to-earnings ratios, and there are no instances in which lenders adjust for operating leases in both covenants simultaneously. Within each covenant type and for the sample overall, lenders exhibit variation in the degree to which they incorporate leases into financial covenants.

TABLE 1
TIME, INDUSTRY, AND COVENANT DISTRIBUTIONS

Panel A: Loan Contracts by Year					
	Year	# Contracts	% Contracts		
	2008	32	28.8%		
	2009	20	18.0%		
	2010	23	20.7%		
	2011	36	32.4%		
	Total	111	100.0%		
Panel B: Firm Observations by Industry (Fama-French 10)					
	Industry Group	# Firms	% Firms		
	Durables	1	1.1%		
	HiTec	3	3.3%		
	Healthcare	4	4.4%		
	Manuf	1	1.1%		
	NonDurables	6	6.6%		
	Other	21	23.1%		
	Shops	54	59.3%		
	Telecom	1	1.1%		
	Total	91	100.0%		
Panel C: Distribution of Financial Covenants and Non-GAAP Adjustments					
	Covenant Type	Covenant Freq.	% Sample	Non-GAAP Adj. Freq.	% Covenant
	Leverage	11	16.4%	4	36.4%
	Debt-To-Earnings	56	83.6%	40	71.4%
	Total	67	100.0%	44	

Table 1 presents sample distributions across time, industries, and covenant types for the sample used to test non-GAAP covenant adjustments for operating leases. Panel A displays the distribution of loan contracts by year. Panel B displays industry distributions for firms using the Fama-French 10 industry classification. Panel C displays the distribution of covenant types and the frequency with which lenders capitalize operating leases within each covenant type.

Table 2 displays sample descriptive statistics. Beginning with summary statistics presented in Panel A I note that of the available sample contracts, 40 percent contain covenant definitions that capitalize operating leases. This provides initial evidence of the degree of variation in the contractual treatment of operating leases. I also note that borrower use of operating leases differs along multiple dimensions. First, the average number of years of minimum lease payments ranges from 5 to 21 years with an average of 8.75 years. Additionally, the present value of future minimum lease payments relative to total assets varies from 22 percent of assets to 342 percent of assets with an average of 56 percent. These sample descriptive statistics are consistent with practice and findings from other studies indicating diversity in how extensively firms utilize leasing as a form of financing. The economic significance of sample operating leases is expected given the sample selection criteria but underscores the extent of lease financing in the sample. Finally, borrowers exhibit some degree of variation in terms of related party leases, leases with residual value guarantees, and synthetic leases with 11 percent of sample contracts exhibiting leases with these attributes.¹⁶

TABLE 2
SAMPLE SUMMARY STATISTICS AND CORRELATIONS

Panel A: Summary Statistics								
Variable	N	Mean	Std Dev	Min	Q1	Median	Q3	Max
Nongaap	111	0.40	0.49	0.00	0.00	0.00	1.00	1.00
Lease_term	111	8.75	2.96	5.00	6.90	8.01	9.76	21.41
Retail	111	0.46	0.50	0.00	0.00	0.00	1.00	1.00
RP_resid_synth	111	0.11	0.31	0.00	0.00	0.00	0.00	1.00
Distress	111	0.41	0.49	0.00	0.00	0.00	1.00	1.00
Lease_intensity	111	0.56	0.45	0.22	0.35	0.47	0.61	3.42
Spread	111	5.12	0.77	2.81	4.83	5.16	5.62	6.55
Deal_amount	111	302.34	430.84	6.00	60.00	150.00	380.00	3000.00
Maturity	111	45.58	16.58	4.93	36.03	48.03	60.03	67.27
PP	111	0.62	0.49	0.00	0.00	1.00	1.00	1.00
Collateral	111	0.68	0.47	0.00	0.00	1.00	1.00	1.00
MVE	111	2290.07	4121.89	17.17	171.87	662.53	2114.75	19096.73
BM	111	0.76	0.72	0.06	0.30	0.52	1.07	3.75
Leverage	111	0.54	0.20	0.17	0.37	0.52	0.70	0.97
Tangibility	111	0.38	0.21	0.09	0.24	0.32	0.50	0.86
Roa	111	0.03	0.14	-0.43	-0.02	0.06	0.10	0.34
Loss	111	0.29	0.46	0.00	0.00	0.00	1.00	1.00
Index_returns	111	0.06	0.26	-0.44	-0.09	0.06	0.20	0.58

Table 2 presents summary statistics and correlations for the sample used to test non-GAAP covenant adjustments for operating lease activity. Panel A presents summary statistics and Panel B presents Spearman correlations. The summary statistics and correlations are for the sample of lending agreements collected from 2008 - 2011. *Significant at the one-percent level. See APPENDIX A for variable definitions.

Panel B provides Spearman correlations for variables used in the multivariate analyses. I turn first to the variables used to test the hypotheses. The first variable of interest, *Lease_term* is positively correlated with non-GAAP adjustments as predicted in H1 and in untabulated analysis is significant at the five-percent level. *Retail* and *RP_res_syn* are also correlated with the dependent variable in the hypothesized direction, although the correlation is weaker. *Distress* exhibits a negative correlation in contrast to the expected positive sign.

TABLE 2 (CONTINUED)
SAMPLE SUMMARY STATISTICS AND CORRELATIONS

Panel B: Spearman Correlations																	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) NongAAP	0.24	-0.12	0.07	-0.18	0.09	-0.28*	0.12	0.13	0.18	-0.34*	0.14	-0.25*	-0.07	0.32*	0.16	-0.19	0.07
(2) Log(Lease_term)		-0.23	0.11	0.03	0.31*	0.14	-0.11	-0.02	0.12	0.02	0.07	-0.12	0.12	0.38*	-0.04	0.04	-0.13
(3) Retail			-0.03	-0.02	0.05	-0.29*	-0.23	-0.09	0.09	-0.21	0.35*	0.11	-0.20	-0.22	0.13	-0.15	-0.14
(4) RP_resid_synth				-0.11	-0.03	-0.01	0.04	0.11	0.09	-0.01	0.06	0.00	0.03	0.07	0.05	-0.16	0.00
(5) Distress					-0.05	0.44*	-0.03	0.07	-0.07	0.42*	-0.25*	0.26*	0.21	-0.12	-0.37*	0.37*	0.03
(6) Lease_intensity						-0.07	0.01	0.17	0.04	0.09	-0.20	0.05	0.03	0.12	-0.12	0.04	-0.12
(7) Spread							-0.05	-0.14	-0.19	0.41*	-0.38*	0.33*	0.41*	-0.04	-0.46*	0.49*	0.00
(8) Log(Deal_amount)								0.26*	0.11	0.17	-0.34*	-0.10	0.02	-0.08	0.04	-0.11	0.04
(9) Maturity									-0.04	0.02	0.05	-0.08	0.03	0.06	0.02	-0.06	0.17
(10) PP										-0.06	0.10	-0.03	-0.19	0.08	0.07	-0.20	-0.19
(11) Collateral											-0.52*	0.36*	0.04	-0.13	-0.41*	0.36*	-0.11
(12) Log(MVE)												-0.52*	0.01	0.08	0.58*	-0.42*	0.02
(13) BM													-0.33*	-0.21	-0.69*	0.46*	-0.19
(14) Leverage														0.12	-0.07	0.22	0.15
(15) Tangibility															-0.03	0.07	0.02
(16) Roa																-0.78*	0.14
(17) Loss																	
(18) Index_returns																	-0.06

Table 2 presents summary statistics and correlations for the sample used to test non-GAAP covenant adjustments for operating lease activity. Panel A presents summary statistics and Panel B presents Spearman correlations. The summary statistics and correlations are for the sample of lending agreements collected from 2008 – 2011. *Significant at the one-percent level. See APPENDIX A for variable definitions.

TABLE 3
NON-GAAP LEASE COVENANT ANALYSIS: LEASE TERM

Variable	Pred	Nongaap	Nongaap
Lease_term	+	0.1783***	
Log(Lease_term)	+		1.5154**
Lease_intensity		-1.0409**	-0.8913**
Spread		-0.2751	-0.2696
Loan_size		1.6860**	1.6004*
Mature		-0.2552	-0.2565
PP		0.1078	0.091
Collateral		-0.8742**	-0.8936**
Size		-0.1055	-0.1169
BM		-0.4499	-0.4492
Leverage		-1.1073	-1.0488
Tangibility		2.4244***	2.4138***
Roa		-2.8969*	-2.8544*
Loss		-0.8005	-0.8383
Index_returns		0.831	0.8608
Constant		2.0594	0.3826
N		111	111
Pseudo R-Squared		32.73%	32.16%

Estimated using heteroskedasticity-robust t-statistics

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 3 presents coefficient estimates from a probit model estimating Equation (1) for the sample of lending agreements collected from 2008 - 2011. The dependent variable is an indicator equal to one if lenders capitalize operating leases (i.e., *Nongaap*) and zero otherwise. The main variable of interest, *Lease_term*, equals five plus the ratio of the "thereafter" portion of disclosed future minimum lease payments divided by the year five future minimum lease payments. See APPENDIX A for detailed definitions of the remaining variables.

Results

Table 3 presents coefficient estimates of Equation (1) using a probit model. These results provide multivariate tests of H1. The first column displays coefficient estimates for the model using the *Lease_term* variable while the second column displays estimates using the log of *Lease_term*. Both specifications show a positive and significant coefficient on *Lease_term* and the log of *Lease_term* consistent with the predictions of H1. The results indicate that lenders are significantly more likely to capitalize operating leases when lending to borrowers with leases of longer duration. These findings suggest that operating lease characteristics affect the incentives lenders face when writing financial covenants. The negative sign on *Lease_intensity* indicates a lower probability of adjusting for operating leases when the present value of future minimum lease payments is higher on average. A positive relation would indicate a linear relation between operating lease intensity and contract adjustment consistent with a uniform treatment of operating leases (i.e., the more operating leases a borrower has, the more likely the lender is to capitalize those leases into debt covenants). In contrast to a uniform treatment, the negative relation for *Lease_intensity* in conjunction with the positive relation for *Lease_term* suggests that lenders consider lease terms in addition to the levels of operating leases when choosing how to define debt

covenants. The results underscore the idea that uniformly capitalizing operating leases into debt covenants is not always in lenders' best interest.

In addition to these findings, the results also indicate that lenders are more likely to make non-GAAP adjustments when borrowers have more physical assets and negative ROA. Lessors are likely to have security interests in a lessee's *non-leased* assets which threatens lenders' bankruptcy priority. The negative coefficient on *Roa* is also consistent with lenders have greater incentive to incorporate operating leases to protect against an increased risk of bankruptcy when borrowers experience negative ROA.

TABLE 4
NON-GAAP COVENANT ANALYSIS: INDUSTRY, LEASE, AND LESSEE
CHARACTERISTICS

Variable	Pred	Nongaap	Nongaap	Nongaap
Retail	-	-0.3744		
RP_resid_synth	+		0.3789	
Distress	+			0.1784
Lease_intensity		-0.2892	-0.3089	-0.2536
Spread		-0.2097	-0.1714	-0.1757
Loan_size		1.5179*	1.6180*	1.6497*
Mature		-0.3122	-0.3123	-0.2972
PP		0.2309	0.197	0.2111
Collateral		-0.9418***	-0.9432***	-0.9491**
Size		-0.0356	-0.0841	-0.0585
BM		-0.3587	-0.4484	-0.4305
Leverage		-0.9601	-0.9434	-0.9917
Tangibility		2.7515***	2.9423***	2.9895***
Roa		-2.8042*	-2.6071*	-2.7959*
Loss		-0.8014	-0.6927	-0.8106
Index_returns		0.5938	0.6494	0.6413
Constant		2.5342	2.3949	2.1575
N		111	111	111
Pseudo R-Squared		29.74%	29.43%	29.18%

Estimated using heteroskedasticity-robust t-statistics

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4 presents coefficient estimates from a probit model estimating Equation (2) for the sample of lending agreements collected from 2008 - 2011. The dependent variable is an indicator equal to one if lenders capitalize operating leases (i.e., *Nongaap*) and zero otherwise. The main variables of interest are *Retail*, an indicator equal to one for borrowers classified as retail firms according to the Fama-French 48 industry classification and zero otherwise; *RP_resid_synth*, an indicator equal to one if the borrower discloses related party, residual value guarantee, or synthetic leases in 10-K filings in the fiscal year preceding contract initiation and zero otherwise; and *Distress*, an indicator variable equal to one if the borrower's z-score is below the four-digit SIC industry median z-score value and zero otherwise. See APPENDIX A for detailed definitions of the remaining variables.

Table 4 presents the results of estimating Equation (2). As in Table 1, I estimate the model using a probit specification with t-statistics calculated based on robust standard errors. This table reports coefficient estimates for three additional proxies of lease characteristics. In the first column, *Retail* has a negative coefficient but is not statistically different from zero. The negative coefficient indicates that contracts are less likely to include non-GAAP adjustments when borrowers are in the retail industry. Similarly, *RP_resid_synth* and *Distress* have coefficients in the predicted direction but are not significantly different from zero. The lack of statistical significance may indicate no effect of these variables on non-GAAP adjustments, a lack of power due to the small sample size, or noisy measures of lease characteristics. The remaining control variables have signs and magnitudes relatively consistent with Table 3 with the exception of *Lease_intensity*, which is no longer significant. Overall, the results from these analyses indicate an association between lease characteristics and lenders' propensity to capitalize operating leases when defining debt covenants.

CONCLUSION

This paper examines the relation between borrowers' operating lease characteristics and lenders' propensity to capitalize operating leases in debt covenants. The purpose of studying this relation is to determine whether lenders treat operating leases equally for contracting purposes. The recent lease accounting rules issued by the FASB and IASB capitalize nearly *all* leases. I argue that bankruptcy laws relating to leases affect lenders' ability to recover principal in bankruptcy proceedings and that these potential costs are related to variation in borrower lease characteristics. Thus, borrower lease characteristics affect lenders contracting incentives and are associated with differential treatment of operating leases as opposed to a "one-size-fits-all" contracting treatment of operating leases.

Using a hand-collected sample of lending agreements from 2008 to 2011, I find that lenders are significantly more likely to capitalize operating leases when borrower leases have longer lease terms. In addition to borrower lease term, I investigate other lease characteristics including related party, residual value guarantee, and synthetic leases and document no significant relations with lenders' propensity to adjust covenants and these lease characteristics. Overall, the analyses provide modest evidence that lenders tailor debt covenant definitions according to borrowers' operating lease characteristics and provide an explanation of how bankruptcy costs affect lenders' incentives for capitalizing operating leases.

ENDNOTES

1. For example, the FASB issued its standard with a "dual approach" for leases. Most capital or financing leases separately report amortization of the lease asset and interest expense on the lease liability whereas most operating leases report a single lease expense. The IASB in contrast issued its standard with a single financial reporting approach where all capitalized leases separately report amortization of the lease asset and interest expense on the lease liability (<https://www.pwc.com/us/en/cfodirect/issues/lease-accounting.html>).
2. See Statement of Financial Accounting Standards 13: Accounting for Leases (SFAS 13) or Accounting Standards Codification 840 (ASC 840).
3. Courts differentiate between "true leases" and "security interests." The true lease designation is used when the court deems a lease arrangement to be an executory contract which receives priority treatment similar to administrative expenses necessary for the on-going operation of the bankrupt firm. The security interest designation is used when the court deems a lease arrangement to be a financing arrangement or debt-financed asset purchase (Mayer, 2005).
4. If the lessee rejects the lease, the lessee must relinquish possession of the leased asset (e.g., returning equipment or vacating a retail shopping location) but is under no obligation to continue lease payments or cure payments in arrears. The lessor may sue for damages but is limited in the amount it can claim for unpaid rent at one year's rent or 15 percent of the rent to be paid over the remaining term of the lease not exceeding three years (Ayer, Bernstein, & Friedland, 2004).

5. Leases with longer terms represent a greater risk to lenders' loss conditional on default because such leases are more likely to be recharacterized as debt in bankruptcy proceedings (Eisfeldt & Rampini, 2009). Synthetic leases are contracts that are carefully structured to be classified as rentals for financial reporting purposes (i.e., operating leases) and economic liabilities, or capital leases, for tax purposes. Synthetic leases are treated as economic liabilities for bankruptcy purposes (Altamuro, 2006).
6. See *In re Integrated Health Service Inc.*, 260 B. R. 71 [Bankr. D. Del. 2001] for an example of a court case distinguishing between true leases and security interests.
7. Distinguishing between leases that are more likely than other leases to be assumed by a lessee in bankruptcy is an empirical challenge. Without observing lease contracts and bankruptcy payouts, it is difficult to determine whether true leases or security interests have higher expected losses in bankruptcy. Thus, I do not explicitly test nor draw conclusions about the predictions related to assumed leases in bankruptcy. The inferences relate only to circumstances in which the bankruptcy court is likely to classify an operating lease as a security interest.
8. If my proxy for synthetic leases is measured with error, I will be less likely to find an effect on lenders' propensity to make non-GAAP adjustments because of attenuation bias.
9. As noted above, I measure *Retail* using the Fama-French 48 industry classification. Using a finer classification scheme is a more conservative measure of firms in the retail industry. A broader industry classification would label more firms as retail firms and would likely bias in favor of finding an effect.
10. *Unocal Corp. v. Union Oil*, 177 F.3d 755 (9th Cir. 1999), cert. denied, 528 U.S.1061 (1999).
11. I hand-collect data on synthetic leases from 10-K Wizard following (Zechman, 2010) using the following search string: "synthetic lease*" or "(residual w/10 guarantee) w/30 (operating lease* or rent*)."
12. Combining the proxies into a single variable is consistent with the treatment of related party and residual value guarantee leases in Altamuro et al. (2013).
13. Chava and Roberts (2008) provide the linking table for the Dealscan-Compustat matching. Additionally, I screen *Compustat* data for firms headquartered in the U.S. ('fic' = 'USA') and with positive values of total assets ('at'>0).
14. Disclosure guidance according to SFAS 13 requires firms to list aggregate future minimum lease payments of all operating leases for the next five years, then a lump sum of such payments for all years thereafter. *Compustat* collects these data and labels them "mrc1" – "mrc5" and "mrcta" for the five years of future minimum lease payments and the thereafter portion, respectively. To calculate a present value amount of the operating leases, I use a 10 percent discount rate consistent with prior research (Ge, 2006) and credit rating practices (Moody's Investor Service, 1999).
15. Li (2010) and Demerjian (2011) report debt-to-earnings (or debt-to-cash flow) ratios in roughly fifty percent of their sample contracts. The nature of my sample selection criteria likely contribute to the high concentration of debt-to-earnings ratios in my sample.
16. Individually, related party, residual value guarantee, and synthetic leases occur less frequently. I aggregate these lease types into a single variable as they have the same directional prediction on lenders' incentives. Related party leases, residual value guarantees, and synthetic leases are all more likely to be characterized in bankruptcy as security interests with the result that lenders' recovery rates decline. Thus, the prediction is that these lease types are associated with an increased probability of capitalizing operating leases into financial covenant definitions.

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APPENDIX A

VARIABLE DEFINITIONS

Variable	Definition	Data Source
<i>NONGAAP</i>	Indicator variable equal to one if a contract modifies GAAP definitions with respect to lease accounting and zero otherwise.	Hand Collection
Lease_term	Thereafter portion of future minimum lease payments (mrcta) divided by year 5 future minimum lease payments (mrc5) or year 4 future minimum lease payments if year 5 is a missing value (mrc4) (following Altamuro et al. (2013)).	Compustat
Retail	Indicator variable equal to one if a firm is in a Retail industry as defined by the Fama-French 48 industry classification and zero otherwise.	Compustat
RP_resid_synth	Indicator variable equal to one if a firm discloses related party leases, residual value guarantees, or synthetic leases in 10-K filings in the fiscal year prior to loan initiation and zero otherwise. I use search strings from Altamuro et al. (2013) to identify related party and residual value leases and Zechman (2010) to identify synthetic leases.	Hand Collection
Distress	Indicator variable equal to one if firm is above the median Altman z-score for the pooled sample of firms and zero otherwise. Altman z-score follows standard calculation based on prior literature.	Compustat
Lease_intensity	Equal to the present value of disclosed future minimum lease payments for operating leases following Ge (2006) modified to include the thereafter portion (mrcta).	Compustat
Spread	Equal to the log of the package-level mean of the maximum basis points identified in Dealscan's pricing dataset.	Dealscan
Deal_amount	Log of loan principal amount.	Dealscan
Maturity	Log of debt maturity in months.	Dealscan
PP	Indicator variable equal to one if a contract contains a performance pricing provision and zero otherwise.	Dealscan
Collateral	Indicator variable equal to one if a contract requires collateral and zero otherwise.	Dealscan
MVE	Common shares outstanding (csho) multiplied by end of year stock price (prcc_f).	Compustat
BM	Book value of equity (seq) divided by market value of equity (csho*prcc_f)	Compustat

APPENDIX A (CONTINUED)**VARIABLE DEFINITIONS**

Variable	Definition	Data Source
Leverage	Total debt (dltt+dlc) divided by total debt (dltt+dlc) plus book value of equity (seq) plus minority interest (mib)	Compustat
Tangibility	Net PP&E (ppent) divided by total assets (at).	Compustat
Roa	Earnings before extraordinary items (ib) divided by total assets (at).	Compustat
Loss	Indicator variable equal to one if a borrower has negative earnings before extraordinary items in the fiscal year prior to loan initiation and zero otherwise.	Compustat
Index_returns	Equal to 12-month CRSP value-weighted index returns from one year prior to contract initiation to the date of contract initiation.	CRSP