The relation between voluntary disclosure and financial reporting: Evidence from synthetic leases

Sarah L. Center Zechman
PhD Candidate in Accounting
University of Pennsylvania-The Wharton School
Email: szechman@wharton.upenn.edu

January 24, 2008

Abstract

Managers must often trade off cash flow objectives with concerns about financial reporting when they structure economic activities. I examine whether managers consider voluntary disclosure, combined with the structuring decision, to alter this tradeoff by enhancing the transparency or maintaining the opacity inherent in mandated reporting. Synthetic leases provide an appealing setting to test the role of voluntary disclosure because they can be undertaken for cash flow and/or opacity (i.e., for off-balance sheet reporting) reasons. Firms in my sample differ in their choice of financing for fixed assets (via a synthetic lease or not) and, contingent upon using a synthetic lease, their use of voluntary disclosure. When managers have incentives to defer cash outflows due to high opportunity costs of cash, I find they choose synthetic leases and provide informative disclosure to communicate the contract's advantages. Alternatively, when managers have incentives to maintain opacity, I find that while they still choose synthetic leases, they provide uninformative disclosure. Alternative tests of changes in financing and disclosure choice around FIN 46 adoption corroborate these findings. The likelihood of consolidation increases given the use of synthetic leases with informative disclosure, consistent with cash flow incentives leading managers to retain the contract (and cash flows) and maintain transparency. Overall, the results are consistent with the hypothesis that managers factor voluntary disclosure into the financing decision to either offset or maintain uninformative reporting.

I greatly appreciate the advice and guidance provided by my dissertation committee: Brian Bushee, Robert Holthausen, Michael Roberts, Catherine Schrand (chair), and Robert Verrecchia. I thank Christopher Armstrong, Stanley Baiman, Jennifer Blouin, Brian Cadman, Mary Ellen Carter, Tim Gray, Peter Linneman, Todd Sinai, and workshop participants at the Wharton School and the EAA Doctoral Colloquium for helpful comments and Mindy Berman, Bret Dooley, and Nancy Little for discussions on the technical aspects of synthetic lease structures. I gratefully acknowledge financial support provided by the Wharton School and the Deloitte Foundation.

1. Introduction

In choosing activities, a manager must often trade off cash flow objectives with concerns about financial reporting. Prior work finds evidence that incentives for transparency or opacity in reporting can influence the selection of an economic activity (e.g., Imhoff and Thomas, 1988; Beatty, Berger, and Magliolo, 1995). These studies do not consider the role that voluntary disclosure can play to alter this tradeoff. With voluntary disclosure, managers can influence the expected interpretation of the financial reporting component of the tradeoff, which can thereby affect the activity choice. Managers concerned about the opacity inherent in the mandated financial reporting will be more likely to select the activity with the best cash flows if voluntary disclosure can overcome that opacity. In contrast, managers who value opacity can withhold information or provide uninformative disclosure to complement the inherently opaque reporting. In this study, I examine whether managers appear to consider voluntary disclosure in the choice of the financing of long-term assets to mitigate or complement opaque reporting inherent in GAAP and, thus, alter the tradeoff between cash flows and reporting.

Synthetic leases provide an appealing setting to study the use of disclosure to alter the tradeoff because of the cash flow and reporting characteristics of the contract. The synthetic lease differs from alternative methods used to obtain the use of a fixed asset (e.g., purchase or traditional lease) in both cash flows and mandated financial reporting. Synthetic leases defer cash outflows more than purchases or traditional leases. In addition, opacity is inherent in the mandated reporting and disclosure, with little evidence of the contract in the financial statements. Outside users have limited ability to effectively capitalize the majority of the value of the synthetic lease without additional voluntary disclosure.

I predict that the cash flow and reporting features of the contract will lead two primary types of firms to use synthetic leases, each with a different voluntary disclosure choice. First, firms with high opportunity costs of cash should choose synthetic leases to defer cash outflows for the use of long-term assets due to better uses for cash. For these firms with "cash flow incentives" voluntary disclosure about the contract is beneficial as it communicates the advantages of the financing method and reduces information asymmetry. Second, firms that benefit from off-balance sheet presentation should choose synthetic leases, in combination with uninformative disclosure, for the opacity of the reporting ("opacity incentives"). Opacity incentives can arise when external stakeholders attempt to gain an accurate picture of the firm's financial state but are misled by the reporting and uninformative disclosure.[1]

Using 3,035 firms with a minimum level of fixed asset needs, of which 120 use synthetic leases, I examine whether managers appear to consider voluntary disclosure in conjunction with the financing decision. If they do so, I expect managers with either high cash flow or high opacity incentives to choose to use synthetic leases to finance fixed assets. Furthermore, contingent upon the use of a synthetic lease, I predict high cash flow incentives will be associated with informative disclosure while high opacity incentives will be associated with uninformative disclosure.

I test these hypotheses using a joint decision model with a trichotomous dependent variable: no synthetic lease, synthetic lease with uninformative disclosure, and synthetic lease with informative disclosure. To proxy for disclosure informativeness, I create a score based on the *ex post* SEC disclosure guidance for off-balance sheet reporting using data that I hand collect from 10-K filings. The existence of *ex post* disclosure guidance is an advantage of this setting as it allows me to create a parsimonious and objective informativeness measure. The cash flow and opacity

[1] Of course, there may be firms that benefit from both the cash flow and opacity incentives as these are not mutually exclusive. The existence of this third group will weaken the ability to find differences in voluntary disclosure between the two incentives.

incentive variables are indices that combine a number of proxies. In developing the opacity variable, I assume that the incentive arises from adverse selection rather than moral hazard, or more specifically, incomplete contracting.[2]

As predicted, I find that firms with higher cash flow incentives are more likely to use synthetic leases combined with informative disclosure, as measured by a *high* disclosure score, than to not use synthetic leases or do so with uninformative disclosure. Similarly, firms with higher opacity incentives are more likely to use synthetic leases combined with uninformative disclosure, as measured by a *low* disclosure score, than the other two alternatives. These findings are robust to a number of alternative model and variable specifications.

I next use a changes analysis associated with a reporting regime shift as an alternative research design to test my prediction that managers consider voluntary disclosure in conjunction with the financing decision. In 2002, the FASB issued Interpretation No. 46: Consolidation of Variable Interest Entities (FIN 46), which requires consolidation of many off-balance sheet structures. Firms with synthetic leases have three primary choices: 1) consolidate (i.e., retain the contract and alter the reporting); 2) purchase the asset; or 3) restructure the contract to retain off-balance sheet reporting.

If managers chose synthetic leases with informative disclosure in response to high cash flow incentives (as hypothesized above) before FIN 46, they should prefer to retain the cash flows and maintain transparency. As consolidation enables both of these outcomes, I predict synthetic-leasing firms with informative disclosure will be more likely to consolidate. I also expect firms that consolidate will provide more disclosure about this choice than those that purchase or restructure. Using the combination of contract and disclosure choice before FIN 46 to identify firm type (i.e.,

[2] However, I consider the moral hazard issue in robustness tests in Section 4.2.2.

proxy for firm incentives), I find managers with *ex ante* informative disclosure are more likely to consolidate, and consolidation is associated with more *ex post* disclosure than the alternatives.

Overall, the results are consistent with managers considering voluntary disclosure together with the financing choice to offset or maintain uninformativeness inherent in the mandated reporting. As predicted, given high cash flow (opacity) incentives, managers are more likely to choose synthetic leases with informative (uninformative) disclosure. Furthermore, when the transparency of mandated reporting increases, those with informative disclosure choose to consolidate the lease to maintain both the cash flows and transparency. These managers also provide more information about this choice than managers who purchase the asset or restructure.

This study provides general insights on synthetic leases and the changes imposed by FIN 46. Except for a concurrent working paper by Altamuro, 2006, this setting has seen limited attention in academic research.[3] While I use synthetic leases to examine the role of voluntary disclosure in the selection of an economic activity, Altamuro examines the financing choice itself—the costs, determinants, and consequences of using synthetic leases relative to secured mortgages in a period that spans the FIN 46 adoption. While that paper lays the groundwork for the underlying reasons to choose the contract, our proxies have limited overlap and our samples differ, primarily due to the different purposes that the studies serve.[4]

By examining synthetic leases as the setting, this paper can contribute to the understanding of how disclosure alters the tradeoff between cash flow and reporting incentives for several reasons. First, two incentives can lead managers to choose synthetic leases (cash flow and opacity). These

[3] Callahan and Spencer, 2006, also use the setting of synthetic leases around FIN 46 to add to the debate on disclosure versus recognition by comparing the association of the market value with the present value of future minimum lease payments (operating and synthetic leases) to the size of the synthetic lease liability recognized after adoption.
[4] To detect cross-sectional differences in disclosure patterns I avoid proxies with dual predictions to cleanly demarcate the cash flow and opacity incentives (e.g., new equity issues could proxy for incentives to reduce information asymmetry or hide risk off-balance sheet).

incentives vary cross-sectionally and are not linked; managers may use a synthetic lease for one or both reasons. Second, as noted previously, the existence of *ex post* disclosure guidance allows me to create a parsimonious and objective measure of disclosure informativeness. Finally, the reporting regime shift allows alternative tests to corroborate the findings.

Section 2 provides motivation and hypotheses. Section 3 lays out the methodology while Section 4 presents the results. Section 5 outlines an alternative set of tests. The final section concludes.

2. Hypothesis Development

Studies of real earnings (and balance sheet) management examine the role of financial reporting in the choice of an economic activity. In addition to survey findings (Graham, Harvey, and Rajgopal, 2005), empirical evidence supports the contention that financial reporting plays a role in activity choice. Results suggest managers make operating decisions (e.g., Roychowdhury, 2006), investing decisions (e.g., Imhoff and Thomas, 1988; Baber, Fairfield, and Haggard, 1991; Bushee, 1998; and Bartov, 1993), and financing decisions (e.g., Hand, 1989, and Mills and Newberry, 2005) to achieve reporting outcomes. Beatty et al., 1995, provide evidence managers choose activities for transparency as well as opacity. They find that managers who benefit from higher net income and lower net assets in impending debt renegotiations are more likely to choose opacity via off-balance sheet R&D entities. Alternatively, managers who want to reduce information costs are more likely to avoid opacity and retain R&D activities on-balance sheet. These studies do not examine voluntary disclosure and its potential to affect the tradeoff between cash flow and financial reporting incentives by altering the interpretation of the reporting.

2.1 Cash flows and financial reporting of synthetic leases

Managers use synthetic leases to obtain access to fixed assets, most often real estate.[5] From the lessee's perspective, two aspects of synthetic leases differ from alternative methods to access fixed assets: cash flows and financial reporting.[6] The following discussion contrasts the cash flows and financial reporting of synthetic leases with two alternatives: purchase and traditional lease.

With respect to cash flows, a typical real estate purchase requires a down payment with the remainder financed using debt. Down payments can be substantial at approximately 30% of the purchase price.[7] In addition to the down payment, the purchaser must periodically pay interest and repay the debt either throughout the contract or in a lump sum at the end. Under a traditional lease, either operating or capital, the firm (lessee) borrows an asset from the owner (lessor) with no up-front payment and makes periodic payments of interest and principal.

In contrast, a synthetic lease entails higher transaction costs than either a purchase or lease, provides 100% financing (similar to a traditional lease), and often requires periodic payments of interest only, not principal.[8] The lease contains a residual value guarantee that requires the lessee to cover initial declines in value of the underlying asset (typically 80-89% of the original purchase

[5] Of the 120 firms in the sample, 91% (109 firms) use the synthetic lease for real estate.

[6] One additional aspect of synthetic leases often noted (e.g., Hodge, 1998 and Altamuro, 2006) is the bankruptcy protection provided by the special-purpose entity (SPE). However, this benefit appears to be minimal. The bankruptcy remoteness does not extend to the lessee's creditors as the courts have generally looked through the structure and viewed the synthetic lease as a mortgage equivalent for tax and real estate purposes. As stated in *Unocal Corp. v. Union Oil, 177 F.3d 755 (9th Cir. 1999), cert. denied, 528 U.S. 1061 (1999)*: "Indeed, general law treats synthetic lease arrangements as transparent for tax and other purposes. The entire point of a synthetic lease is that it is treated as an operating lease for accounting purposes, but is otherwise regarded by virtually all concerned, including the government, as a secured loan." "The synthetic lease should, therefore, be treated as the financing vehicle it is…" The lessor (SPE) and assets are protected from creditors of the lender. As lenders are typically major banks or their subsidiaries, there is low bankruptcy risk.

[7] Several academic and practitioner experts in the field of real estate provided estimates of down payments in the 20-30% range. Evidence obtained from the CMBS database that includes initial terms of rated securities collateralized by properties provides evidence as to the reasonableness of this estimate. In the five-year window before February 2002, the database includes 359 loans, of which 314 are U.S. based. The mean (median) loan-to-value ratio is 64% (67%) and 65% (67%) for the total and U.S.-only populations, respectively.

[8] Higher contracting costs result from complex, nonstandard contracts as well as additional involvement from auditors, tax practitioners, and attorneys to ensure proper financial, tax, and legal treatment is received throughout the contract (Murray, 1997, Hodge, 1998). Per Dorsey, 2000, "Although the concept is not difficult, the structure is complex, and the time and expense required [to set-up a synthetic lease] do not compare favorably with other transaction types."

price) at termination of the lease. The interest rate is tied to the lessee's credit as it retains the majority of risk due to this guarantee.[9] In conjunction with the guarantee, the lease generally requires the lessee to maintain financial covenants similar to corporate borrowings and provide a 100% default guarantee. Beyond the residual value guarantee, if the lessor is an unconsolidated special-purpose entity (SPE), as is typical, the equity investors in the SPE are at risk for their investment (typically 3%) with the remaining risk borne by the creditor. The lessee has low cash demands unless and until the lessee exercises the purchase option or is required to cover the residual value guarantee.

Synthetic leases also provide cash benefits via taxes. All operating and some capital leases are classified as "true leases" by the IRS, in which the *lessor* retains the ownership benefit of accelerated depreciation (Graham, Lemmon, and Schallheim, 1998). The IRS classifies a synthetic lease as a "conditional-sale," similar to a purchase in which the *lessee* retains this tax shield.[10]

With respect to financial reporting differences, a synthetic lease lacks the transparency of a purchase. The lease is off-balance sheet as an SPE is generally the lessor. In a typical synthetic lease, a creditor, generally a bank, provides a loan to the SPE for the purchase or construction of a long-lived asset on behalf of the lessee. The SPE is considered a pass-through entity as it uses funds provided by the creditor plus cash from equity holders (normally 3%) to purchase or construct the asset and passes the lessee's payments back to the creditor as interest and the equity holders as return on investment. The reporting and disclosure are similar to that of an operating lease; the monthly payments, albeit smaller due to the interest-only nature, appear as rent expense and future

[9] The residual guarantee applies if the lessee does not exercise the purchase option, which is generally at the asset's original cost. In addition, some synthetic leases require collateral in support of the debt. Of the 120 sample firms, 20 (16.7%) disclose collateral in the form of cash or short-term investments, between 9%-100% of the asset value.

[10] If the lessor of the synthetic lease valued the deductions, the lessee would incur some cost to retain tax ownership. However, the lessor in a synthetic lease is generally a single-purpose entity with little profit and most of this profit resides with either debt holders (97% ownership interest) or the arranger via fees so little tax pass-through occurs.

commitments in the minimum lease payments schedule with no asset or liability on the balance sheet. The payment schedule often does not include the residual value guarantee.

Opacity results from the reporting if the reader is not aware of the existence and amount of the synthetic lease. For an operating lease, stakeholders can estimate the liability with a heuristic or net present value method using the reported rent expense or future minimum payment schedule (see for example Imhoff, Lipe, and Wright, 1993; Ely, 1995; the Standard & Poor's 2006 Corporate Ratings Criteria; or the Copeland, Koller, and Murrin, 2000, valuation textbook). To the extent external users misclassify a synthetic lease as operating, they underestimate (overestimate) the effective liability (net income) because of the exclusion of principal amounts.[11]

Appendix A includes a summary of the cash flow and reporting differences across methods (Panel A) and an example footnote of a synthetic lease (Panel B). Panel C illustrates how the cash flow and reporting differences affect the financial statements across leasing alternatives. External users can estimate the effective liability for a mix of operating and synthetic leases provided they know: 1) the schedule of future payments; 2) a reasonable approximation of interest rates; and 3) which leases are operating versus synthetic. In the illustration, when the synthetic lease is mistaken for an operating lease, the effective liability estimated represents only 32% of the actual liability. There is a similar underestimation of total expense over the life of the lease.

2.2 Hypotheses

In this section, I focus on the cash flow and reporting incentives to enter into synthetic leases and how disclosure can alter the tradeoff between the two. A synthetic lease involves a tradeoff as the lease contains a particular stream of cash flows and mandated reporting. Some firms benefit

[11] This would hold either if the user estimates the value using the heuristic based on rent expense or using the present value of the future payment schedule if the firm excludes the residual value guarantee from stated amounts.

from the cash flows but prefer greater transparency as the mandated reporting provides insufficient communication. Others may not find the cash flows optimal but the reporting opacity is important enough to offset the cash flows. As these benefits are not mutually exclusive, some firms may benefit from both the cash flow and reporting characteristics. Managers can use voluntary disclosure to offset deficiencies inherent in mandated reporting (i.e., enhance transparency), or can remain silent and force users to rely on their judgments of the probability that the firm *may* have such a contract embedded in the operating lease information. Thus, I predict how the incentives relate to the joint choice to use a synthetic lease and disclose information about the lease.

The first prediction I make is that firms with greater cash flow incentives will be more likely to use a synthetic lease combined with more informative disclosure in order to overcome the opacity inherent in mandated reporting. Absent the financial reporting, firms with higher cash flow incentives should be more likely to use synthetic leases than purchases or traditional leases as they defer more cash flows. However, the financial reporting could alter this positive association unless disclosure can offset the opacity. Disclosing information about the synthetic lease reduces information asymmetry by allowing users to see the hidden contract and effectively unwind the off-balance sheet reporting. For these firms, disclosure reveals the form of financing and the beneficial characteristics inherent in it, and thereby communicates that the choice of the contract is not for opaque reporting reasons. By decreasing information asymmetry, the manager commits to a policy of transparency, which reduces the cost of capital (e.g., Diamond and Verrecchia, 1991; Welker, 1995; Botosan, 1997; Healy, Hutton, and Palepu, 1999; Leuz and Verrecchia, 2000).

As such, I predict the following relation between cash flow incentives and the combination of financing choice and voluntary disclosure:

H1: Firms with greater cash flow incentives will use synthetic leases with informative disclosure.

In Section 3.2.2, I develop an index of variables that measure the cash flow incentives in order to test this hypothesis.

The second prediction I make is that firms with greater opacity incentives will be more likely to use synthetic leases combined with disclosure that is less informative in order to maintain the opacity inherent in the reporting. The opaque reporting creates an adverse selection issue based on private information. This problem arises between the manager and external stakeholders that contract, or plan to contract, with the firm.[12] In the contracting process, stakeholders attempt to ascertain the firm's financial state. By entering into a synthetic lease, the manager can distort the perception of this state and thus maximize firm value at the expense of parties without access to the private information (opacity incentive).

The opacity that arises from off-balance sheet presentation can improve perceived financial performance and ratios. Improved financial appearance can benefit managers in dealings with implicit claim holders such as customers, suppliers, short-term creditors, or employees who base relationship and contracting decisions on the perceived financial health of the company (Bowen, DuCharme, and Shores, 1995). Firms with worse financial performance may benefit from lower perceived bankruptcy risk and a healthier financial appearance. Firms with tighter debt covenants may obtain some relief if creditors cannot see the contract. The potential cost of nondisclosure involves stakeholders perceiving a positive probability that the firm uses a synthetic lease and withholds the information, which imposes information asymmetry and a higher cost of capital.

As such, I predict the following relation between opacity incentives and the combination of financing choice and voluntary disclosure:

H2: Firms with greater opacity incentives will use synthetic leases with less informative disclosure.

[12] I examine the adverse selection problem between the manager and outside stakeholders, rather than current shareholders. Current shareholders can benefit from the opacity if it transfers wealth to them from outsider stakeholders (e.g., by avoiding debt covenant violation). See, for example, the discussion in Guay and Verrecchia, 2007.

I develop an index that indicates the types of firms that benefit from opaque reporting in Section 3.2.3. In the index, I focus on the adverse selection problem of hidden information rather than the moral hazard issue of incomplete contracts, though robustness tests consider the moral hazard issue.

3. Research Design

3.1 Sample selection

I begin with all firms in the DealScan database with a loan type of "synthetic lease" that end after 2000 (see Figure 1 for a timeline). As noted by Altamuro, 2006, this source has several advantages, including that the choice to disclose the loan is made by the lender rather than lessor or lessee and the classification of the loan is made by an independent party (the DealScan administrator). However, this database is known to suffer from a systematic bias toward large loans to public firms (Sufi, 2004). The search finds 267 synthetic leases for 170 firms. For the 117 firms for which I can identify the Compustat identifier, GVKEY, I examine the footnotes of 10-Ks between the last filing before February 2002 through firm adoption of FIN 46.[13] I eliminate firms with events such as IPOs, delistings, or bankruptcy proceedings beginning with the last annual period before February 2002 through the year of adoption. From the 10-K's, I can verify that 66 firms have synthetic leases during the relevant period and respond to FIN 46 (i.e., the lease is "synthetic" and appears to fall under FIN 46).[14] Of these 66 firms, 56 have all required data and choose a consistent adoption strategy across all synthetic leases (Table 1, Panel A).

[13] At the February 27, 2002 FASB meeting companies first became aware of the potential that many existing synthetic leases would be consolidated.

[14] To be conservative, I eliminate 14 firms for which I cannot determine if they use a synthetic lease during the relevant period or if the lease falls under FIN 46. If these firms did use synthetic leases that fell under FIN 46, eliminating them from the sample would weaken the power to detect differences between groups with strong versus weak disclosure incentives. I also eliminate 7 firms that DealScan had classified as synthetic leases, but were not actually synthetic leases based on firm disclosures (e.g, were capitalized on the balance sheet).

To increase the sample size and mitigate the DealScan bias toward large loans to public firms, I search 10-K's between the last filing before February 2002 through firm adoption of FIN 46 for text strings identified in the DealScan sample footnotes.[15] This methodology allows *ex post* identification of firms using information in the filings to identify those that either explicitly disclose the use of a synthetic lease or take actions at FIN 46 adoption consistent with having a synthetic lease. This search finds 317 firms (247 do not overlap with DealScan, of which I can identify GVKEY for 231). Of the 56 firms in the DealScan sample, 77% are included in this procedure. Given the high rate of overlap, these search criteria appear reasonable. I classify an additional 72 firms as having synthetic leases and responding to FIN 46 based on information in the footnotes for the 231 firms. Of these 72 firms, 64 use consistent adoption strategies and have all required data.

The firms from LiveEdgar, while no different in firm size, have smaller synthetic leases (Table 1, Panel B). This statistic indicates the LiveEdgar search procedure helped to counter some of the large deal bias noted in DealScan. Most of the synthetic leases (91%) cover real estate (Panel C). Other assets under the leases include large equipment and transportation devices (primarily fleets of airplanes and railcars). The observations are spread throughout industries, with only one industry lacking observations (insurance and real estate) and no industry with greater than 19% of the observations (Panel D).[16,17]

I compare this sample to a benchmark of 2,915 nonsynthetic leasing firms that meet the following criteria: 1) they have required data in at least one of the three fiscal years before February

[15] The search focused on the footnotes, MD&A, and exhibits of 10-K filings between January 2001 and December 2004 that included either of the following text strings: 1) "synthetic leas*" or 2) "(residual w/10 guarantee) w/30 (operating leas* or rent*)" using the LiveEdgar search function to search the SEC's Edgar database of filings.

[16] That there were no firms in the industry including real estate is intuitive for two reasons. First, it is not clear why a firm in the business of owning real estate and leasing it to other companies would itself be leasing an asset. Second, for real estate investment trusts, the tax shield of ownership would be of little value (Gyourko and Sinai, 1999).

[17] There is a potential sample bias in that firms obfuscating most successfully may not be identified. I require a firm to indicate the lease exists *ex ante*, *ex post* or through accounting or contractual changes at FIN 46 adoption. Exclusion of these firms will weaken the power to differentiate firms with uninformative disclosure.

2002; 2) they are in the same industries as the sample firms; and 3) they have fixed assets, inclusive of off-balance sheet leases, equal to at least the minimum of the sample firms.[18] These firms have a similar need for fixed assets but do not use synthetic leases to fill that need, providing a benchmark for the sample firms.

3.2 Model specification

I test whether managers jointly choose voluntary disclosure and the method of financing. To do so, I examine whether the cash flow and opacity incentives are related to both the contract choice and disclosure informativeness using the following multinomial logit regression.

$$NoSL,\ SL/Low,\ SL/High = \alpha + \beta_1(cash\ flow\ incentives) + \beta_2(opacity\ incentives) + control\ variables \quad (1)$$

The dependent variable is trichotomous, equal to no synthetic lease (**NoSL**), synthetic lease with *uninformative* disclosure (**SL/Low**), and synthetic lease with *informative* disclosure (**SL/High**). H1 predicts firms with high cash flow incentives are more likely to use synthetic leases with informative disclosure (SL/High) than the alternatives. H2 predicts firms with high opacity incentives are more likely to use synthetic leases with uninformative disclosure (SL/Low).

3.2.1 Disclosure informativeness

Not all disclosures provide the same degree of information. Managers can provide irrelevant or limited information that impairs a reader's ability to understand or use the information, as seen in several empirical studies. Evidence from insider trading suggests managers withhold private information for personal trading gains (e.g., Rogers, 2005, and Jagolinzer, 2007). Managers may also provide high quantity but less relevant information (e.g., Miller, 2002). Various models of

[18] To be conservative I eliminate firms from the benchmark sample that were excluded from the initial sample, per Table 1, Panel A, except those 53 firms specifically noted as not having a synthetic lease.

voluntary disclosure also lead to a prediction of nondisclosure as an optimal strategy for the manager (e.g., Jung and Kwon, 1988).

It is essential to create a disclosure proxy that captures the important information related to synthetic leases rather than use a quantity metric, such as a count of words. In this setting, disclosure that is both credible and informative better enables the reader to understand the off-balance sheet structure and unwind the opaque reporting. This particular setting is well-suited to developing a proxy for informative disclosure because shortly after the disclosure period used, the SEC issued guidance about informative disclosures for off-balance sheet structures in *Disclosure in Management's Discussion and Analysis about Off-Balance Sheet Arrangements and Aggregate Contractual Obligations*.[19] This document provides guidance on which disclosures are important for off-balance sheet arrangements, facilitating the construction of a score similar in concept to that used by Botosan, 1997. The requirements fall into four categories. The first includes information on the business purpose of the structure and its importance for factors like liquidity, capital resources, and risk (**WHY**). The second includes facts about the contract such as asset type, magnitude, and financing terms. (**FACTS**). The third covers the contingent obligation (residual value guarantee), including the financial effect and exposure to risk (**OBLIG**). The final measure incorporates circumstances that could cause the contingency to come to fruition (**TRIGGERS**).

Based on reading a sample of footnotes, I develop a checklist of possible disclosures within each category (refer to Appendix C). Each subscore ranges from 0-100 based on the percent of items disclosed. I compile a disclosure score for each firm from its 10-K footnotes for the fiscal year ended before February 2002. The four subscores are aggregated using equal weightings (**OVERALL**). I include this variable ranked and as an indicator equal to one if greater than the median (**OVERALL_HI**). Table 2, Panel A, provides descriptive statistics for each of these

[19] The first draft was issued for comments November 2002 with the final draft effective April 2003.

disclosure variables as well as the overall word count of discussion about the synthetic lease (**WORDCOUNT**). That the 120 sample firms were derived from two different sources does not affect the disclosure quality metric as OVERALL is no different between the DealScan and LiveEdgar samples (Panel B). However, the quantity of information (WORDCOUNT) is greater for those firms in DealScan (p-value < 0.10 in mean and median tests). The disclosure variables are positively correlated, with all but one p-value < 0.10 (Panel C).

The score is a good measure of disclosure informativeness for several reasons. First, the score relies on *ex post* guidance provided by the SEC such that it is an objective measure. Second, the disclosures recommended by the guidance are of the type that can overcome the opacity inherent in the reporting as they allow a user to see through the off-balance sheet presentation. Finally, managers can credibly disclose the information as it is objective and verifiable.

3.2.2 Cash flow incentives

H1 predicts that firms with high cash flow incentives will use synthetic leases with informative disclosure. Managers have cash flow incentives to use synthetic leases to defer cash outflows given high opportunity costs of cash and better uses for those funds.

I create an index to measure cash flow incentives (**CF**) that combines a variety of proxies representing firm characteristics. I average each variable used in the index over the three fiscal years before February 2002 as the typical contract spans five to seven years, contracts could be at any point in the term, and the start date is often unavailable. I transform each variable such that a higher value indicates a greater incentive, adjust for the effects of off-balance sheet leasing (operating and synthetic, see Appendix D for methodology), standardize, and sum. As the resulting distribution is bimodal, I rank the index from zero to one in the empirical tests, where one is equal to the highest level of the incentive. Appendix B provides formal definitions of all variables.

Four variables comprise this index. The first two variables capture firms that are cash constrained relative to the initial down payment and annual outflow but are not financially distressed. To measure the "level" constraint, an indicator variable is set equal to one if free cash flow is less than a 30% down payment and the firm is not distressed (**FCF_LEVEL**).[20] Financial distress is defined as the highest distress decile of a principal component factor score that combines four distress metrics: the Altman z-score (Altman, 1983) and the Ohlson bankruptcy risk measure (Ohlson, 1980), each using original and updated coefficients from Hillegeist et al., 2004.[21] The "flow" variable is equal to free cash flow, rescaled such that one is the lowest (or most constrained) and zero is the highest (or least constrained), and set to zero if the firm is distressed (**FCF_FLOW**).

To capture firms with high opportunity costs of cash (i.e., high growth firms), I include the log of Tobin's Q (**TOBINQ**). The final proxy measures firms with high investment-cash flow sensitivity but not financially distressed. Investment-cash flow sensitivity is based on the methodology developed by Fazzari, Hubbard, and Petersen, 1988.[22] Firm specific regressions estimate the relation between investment and cash flow, controlling for investment opportunities. This variable is set to zero for any firm in the highest distress decile, as defined above (**INVCF**).

The mean or median of each variable is greater for firms that use synthetic leases, except FCF_LEVEL, which is no different (Table 3, Panel A). The index that combines the variables is also greater for sample firms (Panel B). Growth (TOBINQ) and free cash flow (FCF_FLOW) have the opposite relation to the use of synthetic leases as found by Altamuro, 2006. These differences

[20] The synthetic lease amount for firms not using a synthetic lease is set equal to the average synthetic lease of the leasing sample, size-adjusted for the firm that does not have a synthetic lease.
[21] Hillegeist et al., 2004, find the updated coefficients for 1980-2000 for the Ohlson score are superior to the originals but the opposite is true for the Altman z-score. Though noted to be the most informative, several of the updated coefficients for the Ohlson score change signs such that the direction lacks intuition (e.g., size becomes positively related to bankruptcy risk). Therefore, I combine all four metrics rather than choosing one as superior.
[22] It has been noted that this metric may actually capture firm growth rather than investment-cash flow sensitivities (Bushman, Smith, and Zhang, 2007). However, this should not alter my predictions as either investment-cash flow sensitivity or firm growth would capture the underlying CF concept.

are likely attributable to differences in samples (in particular, different benchmark samples) and the time period used as the other study overlaps FIN 46 adoption (1998-2005). In particular, the univariate relation I find between free cash flow and the use of a synthetic lease reverses for distressed firms, suggesting Altamuro's results may be due to a sample more skewed toward firms with poor performance or to the other items controlled for in her multivariate analysis.

In addition to firms that have high opportunity costs of cash, I recognize that financially distressed firms (**DISTRESS**) may also have an incentive to defer cash outflows due to a limited ability and high costs to access cash. While the former type (CF) has strong incentives to use a synthetic lease, the latter (DISTRESS) will find this type of financing high cost as poor performance combined with deferred cash payments impose high risk on the lessor, which should be factored into the interest rate. In empirical tests, I control for DISTRESS to increase the ability to detect the effects of cash flow incentives to use a synthetic lease. I measure DISTRESS with an index similar to CF. The index combines three variables that measure the desire to defer cash outflows due to poor performance and financial distress. The first two are equivalent to the cash level and flow variables for CF but set to zero for firms *not* in the highest distress decile. The third, an indicator variable equal to one if the firm has negative operating cash flows, captures cash constraints resulting from poor operating performance rather than investment opportunity.

3.2.3 Opacity incentives

H2 predicts that firms with high opacity incentives will use synthetic leases with uninformative disclosure. As with cash flow incentives, I create an index to measure opacity incentives (**OPAQUE**). This index is mechanically constructed using a similar process but is comprised of variables that capture three areas in which opaque reporting provides benefits. First, I include four proxies for implicit claims based on those used in Bowen et al., 1995. These variables

capture the degree of relationship and contracting decisions made based on the perceived financial health of the company. Specifically, the proxies capture the level of relations with suppliers (cost of goods sold in the manufacturing industry to gauge dependence on suppliers (**COGS**)), employees (labor intensity (**LABOR)** and existence of a defined benefit pension plan (**PENSION**)), and short-term creditors (short-term notes payable (**NOTEPAY**)).[23]

Second, I include a proxy for benefits from avoiding debt covenant violations by excluding the asset and debt from the financials (i.e., when the exclusion results in a large *change*, given the firm is near the covenant *level*). This variable equals the difference between leverage with and without the synthetic lease for firms with leverage greater than the industry median and zero otherwise (**LEV_DIFF**). Third, I include a similar variable to proxy for benefits from reducing the perceived bankruptcy risk, equal to the difference between the Ohlson bankruptcy risk score (Ohlson, 1980) with and without the synthetic lease, set to zero if the score is less than the industry median (**BANKRUPT_DIFF**). For both variables, a more positive difference represents greater opacity benefits. Note that these variables are mechanically equal to zero for firms without synthetic leases. Thus, I use these proxies only in analyses within the synthetic leasing sample.

Each of these proxies is greater for the synthetic leasing sample in the mean or median, except COGS, where neither is significant (Table 3, Panel A). I aggregate the variables into two different indices that reflect the mechanical nature of LEV_DIFF and BANKRUPT_DIFF for nonleasing firms. **OPAQUE1** is the combination of *all* the proxies, used to evaluate relations within the synthetic leasing sample while **OPAQUE2** includes all proxies *except* LEV_DIFF and BANKRUPT_DIFF, used to evaluate the synthetic leasing sample relative to the nonsynthetic leasing sample. Both indices are greater for the synthetic leasing sample (Panel B).

[23] I exclude two proxies, R&D expense and advertising expense, that could capture either opacity or cash flow incentives as they may proxy for growth in addition to implicit claims. I exclude an indicator for the durable goods industry as I control for industry fixed effects in all regressions.

I chose the inputs to the index under the assumption that the information problem that arises from the financial reporting is one of adverse selection rather than moral hazard. This focus is consistent with the hypotheses, which also focus on the adverse selection problem of hidden information by assuming managers use disclosure to mitigate, or complement, the potential distortion in perceived firm value that arises from the mandated reporting. However, the reporting of synthetic leases can also have implications in the presence of incomplete contracting. These implications occur when the manager can benefit from contracts that do not incorporate the lease, even if the contracting parties are aware of its existence. Incomplete contracting should have minimal implications in this setting as more informative disclosure would not alter the decisions of parties with access to information on financing. While adverse selection is a more natural problem in this setting, I examine the issue of incomplete contracts in robustness tests in Section 4.2.2.

Though I recognize that cash flow and opacity incentives are not mutually exclusive, they are distinct incentives. In particular, the following evidence suggests that the CF variable captures the incentive to use a synthetic lease to defer cash flows rather than for the opaque reporting. First, CF is negatively correlated with OPAQUE1 and OPAQUE2 (-0.06 and -0.08, respectively). The low correlation suggests the variables measure two distinct incentives that are not perfect substitutes. Second, as confirmation that CF captures firms with high opportunity costs of cash due to investment opportunities, sample firms in the top quartile of CF have greater cash outflows for investing (scaled by total assets) than those in the top quartile of OPAQUE1 (untabulated).

Third, if a manager can replicate the 100% financing with debt, it indicates the synthetic lease is used, at least in part, for the reporting. Based on the loans contained in the CMBS database, the 100% financing does not appear to be replicable during this period.[24] Finally, if the initiation of

[24] The CMBS database includes initial terms of rated securities collateralized by properties. No loans in the five years prior to the FASB's discussions of consolidating synthetic leases (1/31/1997-1/31/2002) provided 100% financing for

new synthetic leases ceases after consolidation is required under the reporting regime shift (discussed in Section 5), it would suggest that managers who use synthetic leases all had some degree of opacity incentives.[25] In the period before the FASB discussions (from 1998, when the first synthetic lease was listed on DealScan, through January 2002), 0.44% of the loans listed in the DealScan database are synthetic leases. After February 2002, through December 2004, the percent of loans in the database is 0.16%. Thus, companies still appear to initiate synthetic leases after the reporting becomes transparent, though issuances are less prevalent. Overall, the evidence supports the existence of CF and OPAQUE as measuring two distinct incentives.

3.2.4 Control variables

In addition to DISTRESS, described in Section 3.2.2, the control variables in equation (1) are as follows. To control for a firm's *ex ante* disclosure policy, I include the following variables. The log of 1+ the number of analysts (**ANALYST**) and the percent of shares held by institutional investors (**INSTINV**) and blockholders (**BKHOLDER**) capture the positive relation between firm disclosure policy and investor demands (e.g., Healy et al., 1999; Botosan and Harris, 2000; and Bushee, Matsumoto, and Miller, 2003). Firm size, measured using a factor score that includes the log of sales, total assets and market value of equity (**FIRMSIZE**), controls for the positive relation between firm size and disclosure quality (Lang and Lundholm, 1993).[26] Several studies document a positive relation between a firm's propensity to access equity markets and provide higher quality disclosure (e.g., Lang and Lundholm, 1993; Frankel, McNichols, and Wilson, 1995). An indicator

---

real estate. Of the 359 rated securities with loan-to-value ratios provided, the maximum financing is 90% and the mean (median) is 64% (67%). Only six loans exceed 80% financing.

[25] This is inherently a weak test as: 1) there was an economic downturn in the early 2000's and 2) the corporate climate surrounding Enron and the reporting regime shift increased negative publicity surrounding these structures.

[26] I include a factor of three variables due to weaknesses in each for this particular setting. As some firms use synthetic leases to hide information off-balance sheet, cross-sectional differences based on disclosure may exist in total assets and market value. In addition, due to the diversity in firm characteristics and industry practices, systematic differences may also occur in total revenue measurement (e.g., gross versus net methodology).

variable equal to one if the firm's common shares outstanding (adjusted for splits) has increased over the three prior years by greater than 20% (**PAST_EQUITY**) controls for firms that have been more likely to access equity markets and thus have a more informative disclosure policy.

The findings of Marquardt and Wiedman, 2007, suggest that managers provide lower disclosure quality about events with larger negative effects on reporting. The value of the leased asset scaled by FIRMSIZE (**SLSIZE**) controls for the possibility that one of the incentives is also associated with larger synthetic leases. To control for the imperfect matching of the benchmark group based on proclivity to use fixed assets as well as the perception that synthetic leases should only be used for assets large enough to overcome the high transaction costs, I include the firm's use of such assets. **FA_USED** equals gross fixed assets, regardless of financing method (i.e., inclusive of purchases and on- and off-balance sheet leases; Appendix C provides methodology to estimate off-balance sheet assets). Industry fixed effects control for systematic differences across industries. The distributions of the control variables are in Table 4, Panel A, with correlations in Panel B.

4. Results

4.1 Primary Results

Table 5 presents the results of the multinomial logit regression that examines whether managers take actions consistent with their incorporating voluntary disclosure into the financing decision. Under H1, firms with high cash flow incentives should use synthetic leases in conjunction with more informative disclosure. Thus, cash flow incentives should be positively associated with the use of a synthetic lease and informative disclosure in the multinomial logit. Furthermore, this relation should be greater than that between cash flow incentives and not using a synthetic lease or using one with uninformative disclosure. As seen in Table 5, column 3, increasing cash flow incentives (CF) from the lowest to the highest rank increases the probability of choosing a synthetic

lease with informative disclosure (SL/High) by 1.39% (p-value < 0.01).[27] This result is significantly greater than the relation between cash flow incentives and not using a synthetic lease or using a synthetic lease with uninformative disclosure (p-values from tests of the difference in coefficient on CF for SL/High versus NoSL in column 5 and SL/Low in column 6 are significant at 0.00 and 0.02, respectively).

Similarly, under H2, firms with high opacity incentives should use synthetic leases combined with uninformative disclosure, and this relation should be greater than the alternatives. The results in column 2 are consistent with this prediction as increasing from the lowest to highest ranking of opacity incentives (OPAQUE2) has a positive marginal effect on the probability of using a synthetic lease with low disclosure equal to 0.93% (p-value < 0.05). This increase in probability of using the lease with uninformative disclosure is greater than the positive effect of not using a synthetic lease or using one with informative disclosure (p-values from tests of the difference in coefficient on OPAQUE2 for SL/Low versus NoSL in column 4 and SL/High in column 6 are significant at 0.06 and 0.01, respectively).

The regression includes 120 firms with synthetic leases and 2,915 without. While this specification provides accurate marginal effects and significance levels, it does not provide a sense of the predictive accuracy because of the sample size imbalance. To better assess the predictive ability of the variables, I use a bootstrap procedure with the 120 sample firms plus 120 firms randomly drawn without replacement from the benchmark group. I then run the multinomial logit regression and calculate prediction accuracy 100 times, with average accuracy for NoSL, SL/Low, and SL/High of 83%, 56%, and 38%, respectively (untabulated). While this procedure provides the same inferences about the coefficients, I report only the results using the full 3,035 sample as the bootstrap provides overstated significance levels based on methodology in Fama and MacBeth,

[27] This result is consistent with growth (high cash flow) associated with more (less) disclosure in Altamuro, 2006.

1973. As an additional validity check of the model, a Wald test confirms that the incentive variables (CF and OPAQUE2) provide a significant joint contribution (p-value<0.01).

These results are consistent with managers using voluntary disclosure, in conjunction with the financing choice, to mitigate uninformative reporting in the case of firms with cash flow incentives and to complement the reporting for firms that benefit from opacity.

4.2 Robustness Tests

4.2.1 Alternative econometric specification

The multinomial logit specification in the primary analysis in Section 4.1 is an intuitive method to test the hypothesis that managers consider contracting and disclosure choices jointly because the model incorporates all combinations of these choices: firms without a synthetic lease, with a synthetic lease plus uninformative disclosure, and with a synthetic lease plus informative disclosure. A disadvantage of this model specification is that it forces the determinants for the joint decisions, the contract choice and disclosure choice, to be the same. The multinomial logit also limits the disclosure outcomes to a noncontinuous specification. To address these disadvantages, I estimate separate regressions for the two choices. This method allows the determinants to differ between the financing choice and disclosure choice and incorporates a continuous disclosure variable. The drawback to this model specification is that it mechanically delinks the choices by examining them in separate regressions.[28]

The results of this specification, in Table 6, are consistent with those in Table 5. Panel A examines the selection model (financing choice). Both cash flow (CF) and opacity (OPAQUE2) incentives have positive marginal effects, increasing the probability of choosing a synthetic lease by

[28] I also estimate the two equations using a Heckman 2-stage procedure. The Mills Ratio is not significant, indicating selection bias is not an issue. Therefore, I tabulate results based on separate selection and disclosure regressions.

4.3% and 4.5%, respectively (p-values < 0.01). Panel B examines determinants of disclosure informativeness (disclosure choice). As predicted, higher levels of CF (OPAQUE1) are associated with more (less) informative disclosure (p-values < 0.01 and 0.10, respectively) and disclosure provided by firms with high CF is significantly more informative than that provided by firms with high OPAQUE1 (a χ^2-test of the difference between coefficients has p-value < 0.01).

4.2.2 Control for incomplete contracting

In the prior discussion and empirical specifications, I assume the opacity in the reporting of synthetic leases creates an information problem due to adverse selection. However, the reporting may also create a moral hazard issue if the synthetic lease, though visible to parties such as the board of directors or current creditors, is not incorporated in existing contracts.[29] This could occur if the stakeholders do not anticipate the use, or understand the implications, of a synthetic lease. Incomplete contracts should have minimal implications in this setting, as informative disclosure should not alter the decisions of parties such as the board of directors and creditors with access to information on financing. If incomplete contracting is a problem in debt contracting, the negative association found between OPAQUE1 and disclosure informativeness (OVERALL) in Table 6, Panel B, would be biased downward.

While *ex ante* incomplete contracting does not appear to be an alternative explanation for the relation between the incentives and the joint financing and disclosure decision, I explore the issue further to ensure incomplete contracting does not lead to a correlated omitted variable. To do so, I rerun the analyses with a control variable for the compensation incentive. The control variable that I focus on captures the combination of weak governance and bonus compensation based on

[29] In a random sample of 80 credit agreements attached as exhibits to 10-Ks for fiscal years ending in calendar 2000 (pre-FIN 46), only 10 (13%) included synthetic leases in either the definition of indebtedness or through limitations for initiating new contracts.

findings of Altamuro, 2006. As compensation contracts often incorporate financial performance, a manager may be able to increase his compensation opportunistically by entering into a synthetic lease and increasing net income. Specifically, Altamuro shows that, while weak governance alone does not increase the probability of using a synthetic lease, weak governance *plus* a bonus based on earnings does increase the probability.[30] Bonus compensation may be correlated with CF as these firms are low on cash due to growth and investment opportunities.

Specifically, I include an indicator variable to capture the use of a bonus (obtained from ExecuComp) interacted with a measure of weak governance (obtained from IRRC).[31] Weak governance is equal to the sum of within sample rankings of both the percent of nonindependent directors and nonindependent board ownership, based on the proxy used in Altamuro. Due to data availability, the sample shrinks to 1,174 firms (96 sample and 1,078 benchmark firms). For the within synthetic lease regression in Table 6, Panel B, I supplement the governance and bonus data with hand-collected information obtained from proxy statements. Results (untabulated) are consistent with those in Tables 5 and 6, though results for CF in Table 5 weaken due to loss of firms not covered by ExecuComp and IRRC.

That the results remain consistent when the compensation variable is included, with CF positively associated with SL/High but not SL/Low, confirms that CF is not merely capturing the compensation incentive. The correlated omitted variable problem would only arise if the bonus was positively correlated with both CF and disclosure. However, in this setting, bonus is either

[30] While Altamuro, 2006, also finds the probably of using a synthetic lease increases in the use of a bonus alone, I do not include this variable as there is little variation across my sample firms (based on data in ExecuComp, 91% of benchmark firms and 96% of sample firms with available data pay a bonus).

[31] I use bonus realizations of the CEO or other top decision maker(s) rather than thresholds obtained directly from compensation contracts as Merchant and Manzoni, 1989, found them to be highly correlated. I also assume that bonuses paid are based on earnings based on the findings of Ittner et al., 1997, who document earnings per share, net income and operating income as the most common financial measures used in bonus plans and Murphy, 2000, who finds 91% of his sample firms use accounting measures in their bonus plans.

uncorrelated with disclosure or negatively correlated, consistent with extant studies (e.g., Altamuro, 2006, and Marquardt and Wiedman, 2007).

4.2.3 Alternative disclosure proxy

To examine the robustness of the disclosure results in Tables 5 and 6, I create an alternative proxy for informativeness of disclosure that captures the ability of a reader to unwind the reporting of the synthetic lease. To unwind the reporting, a manager must disclose the use of a synthetic lease and also the value of the asset(s) under the lease. Of the 120 sample firms with synthetic leases, 73 (61%) provide both of these facts. Of the remaining 47 firms, 43 do not tell of the existence, while the remaining four note the existence but not size. An indicator variable classifies the 120 sample firms as providing high versus low disclosure informativeness using this information. Relative to OVERALL_HI, 95 of the 120 firms are classified the same under this specification. The results (untabulated), using this proxy for disclosure, are consistent with those in Tables 5 and 6, though results for the opacity incentive are slightly weaker.

4.2.4 Alternative variables

To ensure the robustness of the incentive variables, I examine several alternative specifications. The results in Tables 5 and 6 are qualitatively consistent with unranked incentives (though results in Panel B of Table 6 weaken) and market-to-book rather than Tobin's Q in CF. The results are also qualitatively consistent when investment-cash flow sensitivity in CF requires a minimum of five, rather than four, observations per firm, though this limits the total sample to 2,647 firms (2,534 benchmark and 113 sample).

I do not include a measure of firm performance as a control variable in the primary regressions as there is likely a high correlation between the incentives and performance such that

inclusion would weaken the power to detect the association between incentives and disclosure choice. However, performance has been documented as a determinant of firm disclosure policy (e.g., Lang and Lundholm, 1993) and may differ across the sample and benchmark firms. Results in Tables 5 and 6 are robust to inclusion of net income before extraordinary items (data18).

Finally, as the disclosure choice regression in Table 6, Panel B, uses only the 120 firms with synthetic leases, it allows for several alternative specifications. First, I use an alternative measure of LEV_DIFF in OPAQUE1, scaling total debt by stockholder's equity rather than total assets. Second, I include OPAQUE2, rather than OPAQUE1. Third, I include an additional hand-collected variable to control for the firm's overall disclosure policy, equal to the quantity of press releases related to performance in the two-year window between January 2000 and December 2001.[32] Results are robust to each of these specifications.

Overall, the results in Section 4 are consistent with managers considering voluntary disclosure with the financing choice to either offset or maintain uninformativeness inherent in mandated reporting. As predicted, given high cash flow incentives, managers are more likely to choose synthetic leases with informative disclosure. The contract provides the best method of financing a fixed asset as it defers more cash outflows than the alternatives and disclosure allows managers to communicate the beneficial features of their financing choice and reduce information asymmetry. Also as predicted, given high opacity incentives, managers are more likely to choose synthetic leases with uninformative disclosure. This choice allows the manager to present improved financial statements without external stakeholders being able to effectively capitalize the lease.

[32] Using the Factiva search engine, I obtain a count of firm issued press releases covering "performance" (topic C15).

5. FIN 46 Adoption

The issuance of FIN 46 represents a change in the mandated financial reporting of synthetic leases, which alters the tradeoff between cash flows and reporting. As such, this setting allows for a changes analysis to corroborate the levels results documented in Section 4. Here, I use the findings from the previous section to predict contractual and disclosure responses of firms with synthetic leases to the reporting regime shift.

5.1 Change in financial reporting regime

Leading to the reporting change, there was widespread belief that managers used SPEs to improve the appearance of their financial statements, especially to keep debt off-balance sheet. At the February 27, 2002 meeting, the FASB first discussed guidance that would require consolidation of many off-balance sheet structures, with the final guidance (FIN 46) issued in January 2003. Under FIN 46, the lessee in a synthetic lease is typically required to consolidate the lease.[33]

Lessees using synthetic leases had several options. First, the lessee could retain the contract and consolidate the lease, with the asset and debt consolidated, and depreciation and interest expensed annually. Second, the lessee could unwind the lease and purchase the asset. This option also results in the asset consolidated and depreciation expense recorded annually.[34] Third, the lessee could restructure the contract to avoid consolidation, usually done by shifting the asset (and debt) from the SPE (termed a "VIE" under FIN 46) to a substantive entity, often a bank subsidiary,

[33] Per Table 1, Panel A, only one firm was eliminated from the sample because the lessee was not deemed the party required to consolidate under FIN 46 (the "Primary Beneficiary").

[34] Other reporting implications depend on how the purchase was funded, via existing or borrowed funds. The borrowing rate is similar to that under the synthetic lease agreement unless the circumstances of the firm have changed.

and signing a new synthetic lease contract. This option generally results in high transaction costs as well as increased financing costs with no other changes in reporting.[35]

Of the 120 sample firms, 43% (52 firms) purchased, 35% (42 firms) consolidated, and 22% (26 firms) restructured in response to FIN 46 (Table 7, Panel A). The distribution of adoption choices is reasonably consistent between the two data sources. The majority of firms (115 firms or 96%) altered their synthetic lease in fiscal years 2002 and 2003 in response to FIN 46 (Panel B).

5.2 Response to Reporting Regime Shift

If managers jointly select the financing and disclosure based on incentives to mitigate or complement opacity in reporting, then an alternative test to the prediction model in Section 4 is to use the joint financing and disclosure choice as a proxy for the firm's incentives and predict FIN 46 adoption outcomes. I predict that firms with high cash flow incentives (i.e., those that use synthetic leases with informative disclosure to mitigate the opaque reporting) should keep the contract to retain the cash flows and maintain the increased transparency as predicted in H1. As consolidation is the only choice that allows the firm to achieve both of these outcomes, I predict the following:

H3: Firms with synthetic leases and informative disclosure before FIN 46 will consolidate the lease at adoption of FIN 46

H3 predicts a change in financial reporting but not voluntary disclosure. This is because consolidation of the lease alleviates the opacity inherent in the financial reporting that the disclosure was intended to mitigate. It is not clear how managers will respond, as the disclosure is no longer necessary. While I do not make predictions about the change in disclosure about the lease itself, I do examine voluntary disclosure about the adoption choice.

[35] Increased financing costs arise from effectively paying a substantive entity to place the assets and debt of the synthetic lease on their balance sheet and incur related depreciation and interest expense. In addition, post-FIN 46, it is possible these structures were perceived negatively such that they were less desirable.

It is more difficult to make an analogous prediction for opacity incentives. Firms with high opacity incentives benefit from the lack of transparency before FIN 46. Given no change in costs or benefits, these firms should have a higher probability of restructuring the contract to retain the off-balance sheet reporting and should maintain a low level of disclosure about the adoption choice. However, there are increased costs to such an action and no reason to expect either a commensurate increase in benefits or cross-sectional variation in these costs. Even if I could ascertain that the costs to restructure outweigh the benefits, it is not *ex ante* clear whether consolidation or purchase is the preferred alternative as both result in similarly transparent reporting. I therefore make no prediction about how firms with high opacity incentives, that use a synthetic lease with uninformative disclosure prior to FIN 46, will react to the issuance of FIN 46.

5.3 Research Design

To evaluate whether firms that use synthetic leases with informative disclosure have a higher probability of consolidation, I employ a multinomial logit regression using a trichotomous dependent variable with categories for consolidate, purchase and restructure (**CPR**). CPR is regressed on informativeness of disclosure given the use of a synthetic lease and control variables.

$$CPR = \alpha + \beta_1(\textit{disclosure informativeness}) + \textit{control variables} \quad (2)$$

Disclosure informativeness equals one if the firm uses a synthetic lease with informative disclosure before FIN 46 (OVERALL_HI) and zero if the lease is accompanied by uninformative disclosure.

The model includes an additional control variable relative to prior tests that is specific to this setting. At the time firms made the CPR decision, there was negative publicity about off-balance sheet structures in general, and synthetic leases in particular, such that the issuance of FIN 46 is not exogenous. The FASB introduced FIN 46 to fix a perceived problem: entities hiding risk off-

balance sheet, with Enron as a prominent example.[36] In addition, beginning with an article about Krispy Kreme's planned use of a synthetic lease to finance a facility, which caused the firm's stock price to plummet 10% the day the article was released, negative publicity about the use of synthetic leases was pervasive (Bauman, Halsey, and Hasback, 2002).[37] Thus, negative publicity costs should be associated with structures that fell under this guidance, particularly with the press and less sophisticated parties, and the existence of the costs may offset the inclination to consolidate.

An index (**NEGPUB**) comprised of the standardized values of four variables captures the likelihood of, and costs related to, negative publicity. First, the quantity of press articles about firm performance before FIN 46, obtained using Factiva, provides an indication of the level of publicity received by the firm (**PRESS**). The inverse of INSTINV and BKHOLDER, as already defined, capture the potential that greater holdings by *less* sophisticated investors indicate greater negative publicity (I assume sophisticated investors have a better understanding of contracts and implications). Finally, I expect firms that early adopt FIN 46 (i.e., consolidate, purchase or restructure the synthetic lease between February 2002 and formal adoption of FIN 46) are more likely to anticipate negative costs (**EARLY_ADOPT**). Early adoption enabled firms to extricate themselves from the lease before disclosing the effect of FIN 46, such that the disclosure could indicate no synthetic leases existed at adoption.

Other control variables are as follows. As in Tables 5 and 6, FIRMSIZE and SLSIZE are included, similarly defined but using adoption year data. I also include controls for the existence (or lack thereof) of funds to purchase the asset in the form of either 1) collateral (**COLLATERAL**,

[36] Enron was using hundreds of SPEs by 2001. When required to restate their financials and consolidate those off-balance sheet entities that *violated* U.S. GAAP in November 2001, Enron decreased earnings between 1997 and 2000 by $613 million (23% of profit during that period) and increased debt in 2000 by $628 million (6% of liabilities) (Healy and Palepu, 2003). As these numbers exclude entities that were off-balance sheet, but complied with U.S. GAAP, the actual amount of assets and debt carried off-balance sheet at Enron was actually much greater.

[37] The article was released on February 5, 2002 in the February 18, 2002 edition of Forbes Magazine and described the firm's use of the synthetic lease as an "off-balance sheet trick".

equal to the ratio of collateral held as cash and short-term investments to the value of the leased asset) or 2) free cash flow in the year before adoption (**FCF**). On average, firms held 11% collateral against the asset under lease, though the majority of firms held none (100 firms or 83%). The mean and median levels of FCF are both positive (Table 7, Panel C).

In addition to the multinomial logit regression, I also examine univariate tests of voluntary disclosure about the FIN 46 adoption choice. If managers choose to consolidate because they initially chose the contract for the cash flows as predicted in H3, these managers should provide more disclosure about the adoption choice than those that purchase or restructure.[38] I examine two FIN 46 disclosure measures across the adoption choices: 1) a count of words that discuss the adoption choice (**ADOPT_WDCT**) and 2) a binary variable equal to one if the firm indicates the adoption choice was the *result* of FIN 46 adoption (**ADOPT_LINK**).

5.4 Results

Table 8, Panel A, provides univariate tests of disclosure and incentive variables across adoption choices. There are no differences in disclosure or cash flow incentives (CF) across outcomes. However, opacity incentives (OPAQUE1) are less associated with the decision to restructure than either alternative, which likely reflects the high costs of both recontracting and paying a substantive entity to assume the assets and debt.

Under H3, firms with more informative disclosure are more likely to consolidate. Results from the multinomial regression of CPR on disclosure are consistent with this prediction. The probability of consolidation increases by 14.5% with an increase from low to high informativeness in disclosure (Panel B, Column 1). This finding is consistent with managers jointly considering

[38] This may be partially mechanical due to the need for additional disclosure about a change in accounting practice for a continuing and unaltered contract.

voluntary disclosure and the contract choice such that disclosure is a reasonable proxy for the incentive to enter into the contract. However, though the positive marginal effect is significant, it is not statistically different from the other alternatives. In the same regression run with the incentives rather than disclosure as a proxy for the incentives, results are consistent with higher cash flow incentives (CF) increasing the probability of consolidation (results untabulated).

In univariate tests of the FIN 46 disclosure proxies across adoption choices, results are as predicted (Table 9). Firms that consolidate provide a greater quantity of disclosure about the choice (ADOPT_WDCT) and are more likely to link that choice to FIN 46 (ADOPT_LINK).

6. Conclusion

Using synthetic leases, I examine whether managers appear to use voluntary disclosure in conjunction with real decisions to offset deficiencies (i.e., enhance transparency) or exploit weaknesses (i.e., maintain opacity) in mandated reporting. A synthetic lease differs in aspects of financial reporting as well as cash flows from alternative methods used to obtain the use of an asset. The lease is more opaque and defers greater cash flows than either a purchase or traditional lease. Without additional disclosure, stakeholders cannot fully capitalize the value of the synthetic lease.

For managers who are concerned about transparency given the opacity inherent in mandated reporting, voluntary disclosure can encourage selection of the contract with the best cash flows if the disclosure aids in overcoming the deficiencies in the reporting. Managers who value the opaque reporting can withhold or provide uninformative disclosure to accompany the reporting.

Using a sample 3,035 firms with a minimum level of fixed asset needs, 120 of which use synthetic leases, I test whether firms with greater cash flow (opacity) incentives are more likely to choose synthetic leases with informative (uninformative) disclosure. The primary specification is a multinomial logit with the choices to not use a synthetic lease or use one with or without

informative disclosure regressed on proxies for cash flow and opacity incentives as well as controls for overall disclosure policy and other firm characteristics. To measure disclosure informativeness, I create a score using data collected from 10-K footnotes based on *ex post* guidance provided by the SEC for off-balance sheet disclosures.

As predicted, firms with higher cash flow incentives are more likely to use synthetic leases with more informative disclosure. This result is consistent with managers of these firms using voluntary disclosure in conjunction with the financing choice to offset the opacity inherent in mandated GAAP. Firms with higher opacity incentives are more likely to use synthetic leases with uninformative disclosure, consistent with using disclosure to complement the reporting. These findings are robust to a number of alternative model and variable specifications.

Next, using a changes analysis around the reporting regime shift under FIN 46, I examine alternate tests to corroborate the findings in the pre-FIN 46 window. If managers factor disclosure into the decision to use synthetic leases to mitigate the opaque reporting, firms with informative disclosure (cash flow incentives) should retain the contract and cash flows as well as maintain transparency. To do so, they should have a higher probability of consolidation as this retains the cash flows and provides transparent reporting. These firms should also provide more disclosure about their choice than firms that purchase or restructure. I do not make similar predictions for firms with uninformative disclosure (opacity incentives) as it is difficult *ex ante* to predict the outcome choice without an understanding of the costs to restructure relative to the costs of transparent reporting. The results are consistent with informative disclosure leading to consolidation and firms that consolidate providing more disclosure about their choice.

There are a number of benefits of using synthetic leases to study the relation between disclosure and economic activity choice. Synthetic leases cover large assets material to the firm and

are relatively easy to detect as the changes made in response to the reporting regime shift affect a sizeable asset and liability in consolidation or purchase or a material contract in restructuring. That these structures are reasonably easy to detect *ex post* should help reduce selection bias in the sample often present in financial statement management studies as those firms best at hiding are often undetected. Firms with synthetic leases span many industries so the results are more generalizable than for more industry-specific settings. This setting has the additional benefit of the imposed change in reporting regime, which altered the financial reporting but not the economic income or cash flows underlying the contract. This shift provides a setting for alternative tests of the predictions using a changes analysis.

Overall, the results of levels tests before FIN 46 and changes tests around FIN 46 are consistent with managers incorporating voluntary disclosure choice into the decision to use synthetic leases to offset or maintain uninformative reporting.

References

Altamuro, J. L. M. (2006). "The Determinants of Synthetic Lease Financing and the Impact on the Cost of Future Debt" (working paper).

Altman, E. I. (1983). "Corporate Financial Distress" John Wiley & Sons, Inc., New York.

Baber, W. R., P. M. Fairfield and J. A. Haggard (1991). "The Effect of Concern about Reported Income on Discretionary Spending Decisions: The Case of Research and Development" Accounting Review 66(4): 818-829.

Barth, M. E., W. H. Beaver and W. R. Landsman (1998). "Relative Valuation Roles of Equity Book Value and Net Income as a Function of Financial Health" Journal of Accounting & Economics 25(1): 1-34.

Bartov, E. (1993). "The Timing of Asset Sales and Earnings Manipulation" Accounting Review 68(4): 840-855.

Bauman, C. C., R. F. Halsey and P. J. Hasback (2002). "Book and Tax Considerations in Off-Balance Sheet Leases" AICPA Case Development Program Case No. 2002-03.

Beatty, A., P. G. Berger and J. Magliolo (1995). "Motives for Forming Research & Development Financing Organizations" Journal of Accounting & Economics 19(2/3): 411-442.

Botosan, C. A. (1997). "Disclosure Level and the Cost of Equity Capital" Accounting Review 72(3): 323-349.

Botosan, C. A. and M. S. Harris (2000). "Motivations for a Change in Disclosure Frequency and its Consequences: An Examination of Voluntary Quarterly Segment Disclosures" Journal of Accounting Research 38(2): 329-353.

Bowen, R. M., L. DuCharme and D. Shores (1995). "Stakeholders' Implicit Claims and Accounting Method Choice" Journal of Accounting & Economics 20(3): 255-295.

Bushee, B. J. (1998). "The Influence of Institutional Investors in Myopic R&D Investment Behavior" Accounting Review 73(3): 305-333.

Bushee, B. J., D. A. Matsumoto and G. S. Miller (2003). "Open versus Closed Conference Calls: the Determinants and Effects of Broadening Access to Disclosure" Journal of Accounting & Economics 34(1-3): 149-180.

Bushman, R. M., A. J. Smith and X. F. Zhang (2007). "Investment-cash Flow Sensitivities are Really Investment-investment Sensitivities" (working paper).

Callahan, C. M. and A. W. Spencer (2006). "The Valuation and Disclosure Implications of FIN 46 for Synthetic Leases: Off-balance Sheet Financing of Real Property" (working paper).

Copeland, T., T. Koller and J. Murrin (2000). "Valuation: Measuring and Managing the Value of Companies" John Wiley & Sons, Inc. Third Edition.

Diamond, D. W. and R. E. Verrecchia (1991). "Disclosure, Liquidity, and the Cost of Capital" Journal of Finance 46(4): 1325-1359.

Dorsey, T. A. (2000). "Maximizing Profits with a Synthetic Lease" Appraisal Journal 68(1): 93-96.

Ely, K. M. (1995). "Operating Lease Accounting and the Market's Assessment of Equity Risk" Journal of Accounting Research 33(2): 397-415.

Fama, E. F. and J. D. MacBeth (1973). "Risk, Return, and Equilibrium: Empirical Tests" Journal of Political Economy 81(3): 607-636.

Fazzari, S. M., R. G. Hubbard and B. C. Petersen (1988). "Financing Constraints and Corporate Investment" Brookings Papers on Economic Activity(1): 141-206.

Frankel, R., M. McNichols and G. P. Wilson (1995). "Discretionary Disclosure and External Financing" Accounting Review 70(1): 135-150.

Graham, J. R., C. R. Harvey and S. Rajgopal (2005). "The Economic Implications of Corporate Financial Reporting" Journal of Accounting & Economics 40(1-3): 3-73.

Graham, J. R., M. L. Lemmon and J. S. Schallheim (1998). "Debt, Leases, Taxes, and the Endogeneity of Corporate Tax Status" Journal of Finance 53(1): 131-162.

Guay, W. R. and R. E. Verrecchia (2007). "Conservative Disclosure" (working paper).

Gyourko, J. and T. Sinai (1999). "The REIT Vehicle: Its Value Today and in the Future" The Journal of Real Estate Research 18(2): 355-375.

Hand, J. R. M. (1989). "Did Firms Undertake Debt-Equity Swaps for an Accounting Paper Profit or True Financial Gain?" Accounting Review 64(4): 587-623.

Healy, P. M., A. P. Hutton and K. G. Palepu (1999). "Stock Performance and Intermediation Changes Surrounding Sustained Increases in Disclosure" Contemporary Accounting Research 16(3): 485-520.

Healy, P. M. and K. G. Palepu (2003). "The Fall of Enron" Journal of Economic Perspectives 17(2): 3-26.

Hillegeist, S. A., E. K. Keating, D. P. Cram and K. G. Lundstedt (2004). "Assessing the Probability of Bankruptcy" Review of Accounting Studies 9(1): 5-34.

Hodge, J. B. (1998). "The Synthetic Lease: Off-balance Sheet Financing of the Acquisition of Real Property" Real Estate Finance Journal 14(2): 59-76.

Imhoff, E. A., R. Lipe and D. W. Wright (1993). "The Effects of Recognition versus Disclosure on Shareholder Risk and Executive Compensation" Journal of Accounting, Auditing & Finance 8(4): 335-368.

Imhoff, E. A. and J. K. Thomas (1988). "Economic Consequences of Accounting Standards- The Lease Disclosure Rule Change" Journal of Accounting & Economics 10(4): 277-310.

Ittner, C. D., D. F. Larcker and M. V. Rajan (1997). "The Choice of Performance Measures in Annual Bonus Contracts" Accounting Review 72(2): 231-255.

Jagolinzer, A. D. (2007). "SEC Rule 10b5-1 and Insiders' Strategic Trade" (working paper).

Jung, W. O. and Y. K. Kwon (1988). "Disclosure When the Market Is Unsure of Information Endowment of Managers" Journal of Accounting Research 26(1): 146-153.

Lang, M. and R. Lundholm (1993). "Cross-Sectional Determinants of Analyst Ratings of Corporate Disclosures" Journal of Accounting Research 31(2): 246-271.

Leuz, C. and R. E. Verrecchia (2000). "The Economic Consequences of Increased Disclosure" Journal of Accounting Research 38(3): 91-124.

Marquardt, C. A. and C. I. Wiedman (2007). "Disclosure, Incentives, and Contingently Convertible Securities" Accounting Horizons 21(3): 281-294.

Merchant, K. A. and J.-F. Manzoni (1989). "The Achievability of Budget Targets in Profit Centers: A Field Study" Accounting Review 64(3): 539-558.

Miller, G. S. (2002). "Earnings Performance and Discretionary Disclosure" Journal of Accounting Research 40(1): 173-204.

Mills, L. F. and K. J. Newberry (2005). "Firms' Off-Balance Sheet and Hybrid Debt Financing: Evidence from Their Book-Tax Reporting Differences" Journal of Accounting Research 43(2): 251-282.

Murphy, K. J. (2000). "Performance Standards in Incentive Contracts" Journal of Accounting & Economics 30(3): 245-278.

Murray, J. C. (1997). "Off-Balance-Sheet Financing: Synthetic Leases" Real Property, Probate and Trust Journal 32(2): 193-253.

Ohlson, J. A. (1980). "Financial Ratios and the Probabilistic Prediction of Bankruptcy" Journal of Accounting Research 18(1): 109-131.

Rogers, J. L. (2005). "Disclosure Quality and Management Trading Incentives" (working paper).

Roychowdhury, S. (2006). "Earnings Management through Real Activities Manipulation" Journal of Accounting & Economics 42(3): 335-370.

Sufi, A. (2004). "Does Joint Production of Lending and Underwriting Help or Hurt Firms? A Fixed Effects Approach" (working paper).

Welker, M. (1995). "Disclosure Policy, Information Asymmetry, and Liquidity in Equity Markets" Contemporary Accounting Research 11(2): 801-827.

Appendix A: Synthetic Leases

Panel A: Comparison of methods to obtain the use of a fixed asset, from the lessee's perspective

	Purchase (w/debt)	Capital Lease	Operating Lease	Synthetic Lease
Cash Flow Outflows Beginning	Down payment (approx. 30%)	0	0	Higher up-front costs
Annual	Interest (possibly principal)	Interest, principal, lessor's profit	Interest, principal, lessor's profit	Interest
End	Principal remaining	0	0	Residual value guarantee (if FMV<original cost) *or* purchase at original cost[39]
Tax Treatment	Tax shield	Tax shield	N/A	Tax shield
Reporting Balance Sheet	On-balance sheet	On-balance sheet	Off-balance sheet	Off-balance sheet
Income Statement	Interest, depreciation	Interest, depreciation	Rent (equal to interest, usage and lessor's profit)	Rent (equal to interest)

Panel B: Example synthetic lease footnote (Chiron Corporation, per 12/31/2001 10-K footnotes)

In June 1996, Chiron entered into a seven-year agreement with a group of financial institutions (referred to as the "lessors" in this section) to lease a research and development facility. Construction was completed on this facility in 1999. The total cost of the facility covered by this lease was $172.6 million. Chiron accounts for this lease as an operating lease and, as a result, records neither an asset nor a liability on its balance sheet. The future minimum lease payments stated above include only the annual lease payments of $7.5 million for 2002 and $3.5 million for the first six months of 2003. The annual lease payments represent variable-rate interest payments (indexed to the London interbank offered rate) on the $172.6 million lease financing… For tax purposes, the lease is considered a capital lease-the annual lease payments are characterized as interest expense with the tax depreciation on the facility reducing taxable income and, therefore, the current tax liability.

The lease provides a $146.7 million residual value guarantee from Chiron to the lessors in the event of property value declines. Consequently, Chiron's maximum payment obligation is $146.7 million upon termination of the lease on or before July 1, 2003.

On or before July 1, 2003, Chiron can choose to either purchase the facility from the lessors or sell the facility to a third party. This option accelerates if Chiron defaults on its lease payments.

If Chiron purchases the facility, Chiron must pay the lessors $172.6 million, record the facility (on its balance sheet) at the facility's cost and depreciate the facility over its remaining estimated useful life. In addition, if Chiron finances the purchase of the facility, Chiron would incur interest expense.

If Chiron sells the facility on the designated sale date, the sales proceeds would be distributed as follows: (1) to the lessors for their residual interest in the cost of the facility (cost of the facility less the residual value guarantee or $25.9 million); and (2) to Chiron for amounts paid under the residual value guarantee on or before July 1, 2003. If Chiron does not sell the facility by the designated sale date, the lessors may market the facility for sale. When the lessors sell the facility, the sales proceeds first would be distributed to the lessors for marketing and operating costs, then in the order as indicated in the previous sentence. If the facility is sold for more than $172.6 million, Chiron receives the remaining proceeds and, possibly, recognizes a gain. Likewise, if the facility is sold for less than $172.6 million, Chiron recognizes a loss up to the residual value guarantee.

[39] At the end of the lease, the lessee has the option to purchase the asset under the synthetic lease. The purchase amount is generally equal to the original purchase price (the same price usually applies to early exercise of the purchase option). If the lessee does not elect to purchase the asset, they are responsible for a residual value guarantee, requiring the lessee pay the lessor for any decline in value of the leased asset (based on the original cost basis) up to a predetermined percentage (generally 80-89%).

Appendix A: Synthetic Leases (continued)

Panel C: Illustration of expense and liability across leasing alternatives

Assumptions:	**Capital Lease**	**Operating Lease**	**Synthetic Lease**
Lease Term:	5 years	5 years	5 years
Annual Payment:	Principal/interest ($200,000)	Principal/interest ($200,000)	Interest only ($63,883)
Interest Rate:	8%	8%	8%
Liability:	NPV of payments	NPV of payments	NPV of payments
Expense:	Straight-line depr, Interest	Rent expense=payments	Rent expense=payments

	Operating or Capital			Synthetic	Capital Lease		Operating Lease		Synthetic lease	
Period	Annual payment	Interest (@ 8%)	Principal reduction	Payment and interest (@8%)	Liability	Expense (straight-line depr + interest)	Effective liability (NPV method)	Expense (rent)	Effective liability (NPV method)	Expense (rent)
0	(1)			(2)	798,542	(a)	798,542	(a)	255,068	(b)
1	200,000	63,883	136,117	63,883	662,425	223,592	662,425	200,000	195,916	63,883
2	200,000	52,994	147,006	63,883	515,419	212,702	515,419	200,000	141,147	63,883
3	200,000	41,234	158,766	63,883	356,653	200,942	356,653	200,000	90,434	63,883
4	200,000	28,532	171,468	63,883	185,185	188,241	185,185	200,000	43,478	63,883
5	200,000	14,815	185,185	63,883	0	174,523	0	200,000	0	63,883
	1,000,000	201,458	798,542	319,417		1,000,000		1,000,000		319,417

(a) Equal to the net present value of annual payments for operating and capital leases (column 1) using 8% interest rate.
(b) Equal to the net present value of annual payments for synthetic leases (column 2) using 8% interest rate.

Appendix B: Variable Definitions

Notes:
1. Where appropriate, incentive and control variables pre-FIN 46 are averaged across the three fiscal years ending before February 2002, and control variables in the adoption tests are measured as of the fiscal year of adoption.
2. Where appropriate, variables are adjusted for the effects of off-balance sheet leasing (operating and synthetic) using methodology from Appendix C.

Voluntary Disclosure

WHY = score based on disclosure of the purpose for using the synthetic lease, from the 10-K footnotes for the fiscal year ended before February 2002. Refer to Appendix D for further discussion.

FACTS = score based on disclosure of material facts about the synthetic lease contract, from the 10-K footnotes for the fiscal year ended before February 2002.

OBLIG = score based on disclosure of the residual value guarantee, from the 10-K footnotes for the fiscal year ended before February 2002.

TRIGGER = score based on disclosure of information about circumstances that could cause the company to become liable for off-balance sheet obligation, from the 10-K footnotes for the fiscal year ended before February 2002.

OVERALL = the ranked average of WHY, FACTS, OBLIG, and TRIGGER disclosure subscores.

OVERALL_HI = 1 if OVERALL is greater than the median, 0 otherwise.

WORDCOUNT = count of words discussing the synthetic lease in the footnotes to the 10-K for the fiscal year ended before February 2002.

ADOPT_WDCT = count of words discussing adoption choice in response to FIN 46.

ADOPT_LINK = 1 if the firm indicated the adoption choice (consolidate, restructure or purchase) was the result of adopting FIN 46 (i.e., the action was "linked" to FIN 46), 0 otherwise.

Cash Flow Incentives

FCF_LEVEL = 1 if a firm is cash constrained and not close to financial distress, 0 otherwise. Cash constrained is having free cash flow ((cash flow from operations (data308) - capital expenditures (data128)) / beginning of year assets (data6)) less than 30% of the synthetic lease value/assets. Close to financial distress is the highest distress decile of a factor score combining the Altman Z and Ohlson bankruptcy scores, using both original and updated coefficients for each from Hillegeist et al., 2004. The synthetic lease value for nonsynthetic leasing firms is the average synthetic lease value across synthetic lease firms, size adjusted for the nonleasing firm (i.e., multiplied by the ratio of FIRM_SIZE for the nonsynthetic lease firm to the average synthetic lease firm).

FCF_FLOW = free cash flow constraint (free cash flow defined under FCF_LEVEL transformed to range from 1 for the lowest free cash flow to 0 for the highest) if the firm is not close to financial distress, 0 otherwise. Close to financial distress defined under FCF_LEVEL.

TOBINQ = log((mve (data25*data199)-equity (data216)+assets(data6))/assets)

INVCF = investment-cash flow sensitivity (ICF) for firms not close to financial distress, 0 if close to distress. ICF is the coefficient on cash flow in a firm-specific regression of investment (capex (data128) / net PPE (data8)) on cash flow (income (data18) - depreciation expense (data14) / net PPE) and investment opportunities (debt (data9) +equity (data216) /net PPE) for firms with data in at least 4 of 7 years before February 2002. Close to financial distress is defined under FCF_LEVEL.

CF = sum of standardized values of FCF_LEVEL, FCF_FLOW, TOBINQ and INVCF.

Appendix B: Variable Definitions (continued)

Opacity Incentives

COGS = cost of goods sold (data41) less the change in LIFO reserve (data240) scaled by beginning of year assets (data6) if the firm is in a durable goods industry (SIC codes 150-178, 245, 250-259, 283, 301, and 324-399), 0 otherwise

LABOR = 1-(net ppe (data8) / assets (data6))

PENSION = 1 if the firm has a defined benefit pension plan (a nonnegative value for projected pension obligation (data286 or data294) or assumed rate of return for pension benefits (data246)), 0 otherwise

NOTEPAY = notes payable (data206) scaled by beginning of year assets (data6)

LEV_DIFF = the effect of synthetic lease reporting on the firm's effective leverage ratio, equal to the difference between leverage ((data9+data34)/(data6)) with operating and synthetic leases capitalized and leverage with operating, but not synthetic, leases capitalized if the leverage ratio is greater than the annual industry median, 0 otherwise.

BANKRUPT_DIFF= the effect of synthetic lease reporting on the firm's perceived bankruptcy risk, equal to the difference between bankruptcy risk based on Ohlson, 1980, with operating and synthetic leases capitalized and bankruptcy risk with operating, but not synthetic, leases if the bankruptcy risk is greater than the annual industry median, 0 otherwise.

OPAQUE1 = sum of standardized values of COGS, LABOR, PENSION, NOTEPAY, LEV_DIFF, BANKRUPT_DIFF,

OPAQUE2 = the same as OPAQUE1, except excludes LEV_DIFF and BANKRUPT_DIFF

FIN 46 adoption choice

C = 1 if the synthetic lease is consolidated at FIN 46 adoption, 0 otherwise

P = 1 if the asset under synthetic lease is purchased at FIN 46 adoption, 0 otherwise

R = 1 if the synthetic lease contract is restructured at FIN 46 adoption to maintain off-balance sheet treatment, 0 otherwise

Control Variables

DISTRESS = close to financial distress equals to the sum of standardized values of FCF_LEVEL and FCF_FLOW set equal to zero if the firm is *not* close to financial distress, and an indicator equal to 1 if the firm had negative cash flow from operations (data308).

ANALYST = log of 1 + the number of analysts contributing to the annual EPS consensus forecast (per IBES)

INSTINV = percent of shares held by institutional investors

BKHOLDER = percent of shares held by large block holders

FIRMSIZE = firm size, equal to a factor score of the standardized log of assets (data6), sales (data12), and market value of equity (data25*data199).

PAST_EQUITY = 1 if the firm's common stock outstanding (data25), adjusted for splits, increased by more than 20% over the past 3 years, 0 otherwise.

SLSIZE = dollar value of the asset under synthetic lease, scaled by FIRMSIZE for synthetic lease firms. For nonsynthetic lease firms, equal to the size adjusted average synthetic lease (average synthetic lease asset for synthetic lease firms multiplied by the ratio of total assets/average total assets of synthetic lease firms).

FA_USED = total fixed assets used by the firm, equal to (gross PPE (data7) + 8*annual rent expense(data47) - 8*estimated rent expense attributable to synthetic lease (synthetic lease value multiplied by the sum of the annual LIBOR rate +300 bps) + synthetic lease asset value)/1,000

PRESS = log of 1 + the number of press articles related to firm performance (topic C15) between January 2000 and December 2001 obtained from Factiva (excludes firm issued press releases).

EARLY_ADOPT= 1 if the firm consolidated, purchased, or restructured the synthetic lease before FIN 46 adoption (i.e., in the period between February 2002 and when the firm announced they had adopted FIN 46), 0 if the firm did so in the year of adoption.

NEGPUB = equal to standardized values of PRESS – INSTINV – BKHOLDER + EARLY_ADOPT.

COLLATERAL = the ratio of collateral held (cash and short-term investments) to synthetic lease value

FCF = free cash flow (cash flow from operations (data308) +capital expenditures (data128)), scaled by beginning of year assets (data6)

Appendix C: Summary of the elements of the disclosure score

Each item within a category is given a 1/0 score based on whether the firm provides written indication of the item in the 10-K footnotes for the fiscal year before February 2002. The percentage of items disclosed then represents the score for that section. Thus, the scores each range from 0-100. The overall score is an average of each of the four subscores provided below.

I. Why the firm entered into the synthetic lease:
   a. Beneficial financing terms
   b. Off-balance sheet presentation
   c. End of contract options
   d. Ability to finance 100%
   e. Interest-only payments
   f. Beneficial tax treatment

II. Material facts about the contract:
   a. Asset type
   b. Asset size
   c. Description of lessor (e.g., SPE, trust, etc.)
   d. Financing terms (e.g., list rate or rate over LIBOR)
   e. Accounting treatment
   f. Existence of purchase option

III. Nature and amount of obligation:
   a. Existence of residual value guarantee
   b. Amount of residual value guarantee, either in dollars or percent of asset value
   c. Comparison between current market value and residual value guarantee
   d. Effect on financial statements if synthetic lease were consolidated

IV. Triggers of the obligation
   a. Financial covenants
   b. Terms of the residual value guarantee
   c. Length of contract or expiration date
   d. Renewal options
   e. Information on collateral

Appendix D: Methodology to capitalize off-balance sheet leases

Step 1: Obtain annual firm implied interest rate

a) Calculate the implied borrowing rate for each firm year by adding interest expense and capitalized interest and dividing the sum by average total debt outstanding, setting capitalized interest to zero where missing. This method estimates an implied rate for over 95% of sample year observations.
b) For observations missing implied interest with facilities on DealScan during the year, obtain the average rate over LIBOR for amounts drawn down on facilities and add in the average annual LIBOR rate.
c) For observations missing implied interest without facilities on DealScan during the year, use the average implied interest for the firm in the year before and after.

Step 2: Estimate adjustments for Synthetic Leases[40]

a) Adjustment for liability (and gross PPE): equal to the disclosed liability balance if provided by the firm, or the disclosed asset balance if no liability balance disclosed. Note: as the value disclosed under the residual value guarantee is based on original purchase price, this method approximates the gross asset value as well as the related liability.
b) Adjustment for interest expense: equal to the adjustment for liability (Step 2a) multiplied by the implied interest rate calculated in Step 1.
c) Adjustment for depreciation expense: value assigned to the adjustment for liability (Step 2a) divided by 40 (assumes an average 40-year life and use of the straight-line depreciation method).
d) Adjustment for net property balance: assuming the average synthetic lease has been outstanding three years as of February 2002, subtract this many years of depreciation expense (Step 2c) from the adjustment for the liability (Step 2a) to obtain an annual net property value.[41]

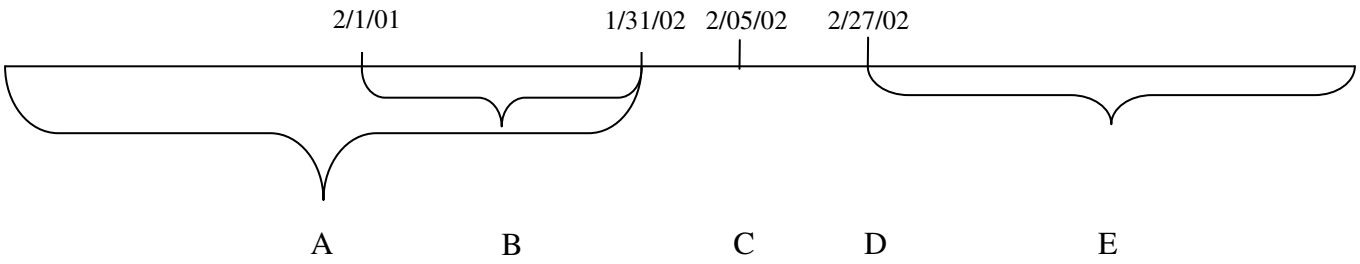
Step 3: Estimate adjustments for Operating Leases

a) Calculate the net present value of the future minimum lease payments. First, subtract the estimated synthetic lease interest expense (Step 2b) from each year of the lease obligations in the future minimum lease obligation footnote table. Transform the "thereafter" amount into equal annual obligations in amounts equal to the year 5 obligation. Set any future payment that is negative as a result of the estimated adjustment for the synthetic lease to zero. Next, calculate the present value of the newly estimated payment stream using the implied interest rate estimated in Step 1.
b) Adjustment for liability: equal to the net present value of future minimum lease obligations estimated above
c) Adjustment for interest expense: equal to the adjustment for liability multiplied by the implied interest rate calculated in Step 1.
d) Adjustment for depreciation expense: equal to the current year's rent expense less estimated interest expense (Step 3c).
e) Adjustment for net property balance: equals the debt balance (Step 3b).

[40] Information on synthetic leases for firms that do not provide forthcoming disclosure on the magnitude of the synthetic lease was inferred from *ex post* disclosures surrounding FIN 46 adoption activity. For example, if at FIN 46 adoption the firm discloses, either in the footnotes or in an exhibit to the 10-K, an amended contract for a property under operating lease, where the lessor was changed from an SPE to a substantive entity (i.e., bank), I assume this was a restructuring. The asset and debt size are then obtained for the synthetic lease from this agreement.

[41] I assume synthetic leases have been outstanding three years as the average life is 5-7 years and each lease can be at any point within this span.

Figure 1: Timeline



Definitions

A = Pre-FIN 46 period used to obtain variables other than disclosure scores, equal to three fiscal years ending before February 2002

B = Pre-FIN 46 period used to obtain disclosure scores, equal to the fiscal year ending before February 2002

C = Krispy Kreme article in Forbes Magazine

D = First FASB meeting discussing consolidation of off-balance sheet structures, including synthetic leases

E = FIN 46 adoption period. Adoptions are treated as being in response to FIN 46 (or the "expected" FIN 46) if they occurred after the 2/27/2002 FASB meeting

Table 1: Sample Description

These panels contain descriptive statistics for 120 firms using synthetic leases. Panel A provides details on the sampling procedures. Panel B shows a univariate comparison of firm and lease size, by source. Panel C shows the distribution of assets under the lease and Panel D shows the distribution of observations across industries. The p-values of the t-test of the differences in the means across the samples assume equal variances unless equality is rejected at 10% level. The p-values of tests of differences in the medians across the samples are for a two-sided Wilcoxon rank-sum test.

Panel A: Sample population

	DealScan	LiveEdgar	Total
Initial sample with GVKEY:	117	231	348
Less:			
Not a synthetic lease	7	46	53
Entity ceases reporting (IPO/deslisting)	5	20	25
Duplicate entity (keep parent, drop subsidiary)	6	14	20
Chapter 11 bankruptcy	4	11	15
Synthetic lease ends before 2/27/2002 (a)	6	10	16
Synthetic lease began after 2/27/2002 (a)	7	7	14
Lessor is not a Variable Interest Entity	2	6	8
Lessee is not a Primary Beneficiary	0	1	1
Firms with multiple adoption outcomes	7	6	13
Not enough information to determine	14	44	58
	59	66	125
Firms missing required data	3	2	5
Total Sample Population	56	64	120

(a) The February 27, 2002 FASB meeting was the first discussion of the guidance that would become FIN 46.

Panel B: Synthetic lease size and firm size, by source

	DealScan sample					LiveEdgar sample					p-values	
(in millions)	Obs	Mean	Median	Min	Max	Obs	Mean	Median	Min	Max	Mean	Median
Total assets (a)	56	20,085	4,409	271	304,231	64	14,707	2,898	98	284,277	0.52	0.39
Synthetic lease	56	275	167	13	1,720	64	126	87	8	634	0.00	0.00
Synthetic lease /total assets	56	0.074	0.050	0.002	0.459	64	0.048	0.021	0.001	0.340	0.06	0.03

(a) Total assets is averaged across the three fiscal years prior to February 2002 and adjusted to capitalize off-balance sheet leases (operating and synthetic) using methodology in Appendix C.

Panel C: Distribution of asset type under synthetic lease

	Count		Percent
Real estate	86		
Real estate + equipment	20		
Real estate + transportation	1		
Real estate + equipment + transportation	2		
Total real estate		109	91%
Equipment	6		
Transportation	3		
Equipment + transportation	2		
Total nonreal estate		11	9%
TOTAL		120	

Table 1 (continued)

Panel D: Overall sample by industry (industries per Barth, Beaver, and Landsman, 1998)

Industry:	**Total**	
Mining and construction	1	1%
Food	1	1%
Textiles, printing	7	6%
Chemicals	5	4%
Pharmaceuticals	6	5%
Extractive industries	3	3%
Durable manufacturers	21	18%
Computers	8	7%
Transportation	6	5%
Utilities	9	8%
Retail	19	16%
Financial institutions	10	8%
Insurance & real estate	0	0%
Services	23	19%
Other	1	1%
	120	

Table 2: Voluntary disclosure variables

These panels contain descriptive statistics of voluntary disclosure measures for 120 firms using synthetic leases. Variables are defined in Appendix B. The p-values of the t-test of the differences in the means across the samples assume equal variances unless equality is rejected at 10% level. The p-values of tests of differences in the medians across the samples are for a two-sided Wilcoxon rank-sum test.

Panel A: Disclosure variable distributions

	Obs	Mean	St.Dev	Min	25%	Median	75%	Max
Disclosure (unranked)								
OVERALL	120	34	22	0	17	38	52	73
OVERALL Subscores								
WHY	120	5	11	0	0	0	0	50
FACTS	120	50	32	0	17	67	83	100
OBLIG	120	38	28	0	0	50	50	100
TRIGGER	120	43	35	0	0	50	75	100
WORDCOUNT	120	229	225	0	61	177	317	1,326

Panel B: Disclosure variables by source

	DealScan			LiveEdgar			p-values	
	Obs	Mean	Median	Obs	Mean	Median	Mean	Median
OVERALL	56	36	40	64	32	38	0.32	0.37
WHY	56	6	0	64	4	0	0.24	0.43
FACTS	56	54	67	64	47	50	0.26	0.26
OBLIG	56	38	50	64	39	50	0.82	0.93
TRIGGER	56	47	50	64	39	25	0.20	0.20
WORDCOUNT	56	270	220	64	194	148	0.06	0.07

Panel C: Correlation matrix. Bold correlations are significant at 10%

	OVERALL	WHY	FACTS	OBLIG	TRIGGER
WHY	**46%**				
FACTS	**91%**	**45%**			
OBLIG	**80%**	14%	**58%**		
TRIGGER	**91%**	**32%**	**76%**	**62%**	
WORDCOUNT	**72%**	**41%**	**71%**	**53%**	**61%**

Table 3: Cash flow and opacity incentive variables

Panels A and B provide descriptive statistics for proxies, and variables used to create proxies, for cash flow (CF) and opacity (OPAQUE1 and OPAQUE2) incentives for 120 firms with and 2,915 firms without synthetic leases. Variables are defined in Appendix B. The p-values of the t-test of the differences in the means across the samples assume equal variances unless equality is rejected at 10% level. The p-values of tests of differences in the medians across the samples are for a two-sided Wilcoxon rank-sum test. For binary variables, p-values are for a $\chi 2$ test.

Panel A: Univariate comparisons of variables used to create the incentive indices

	Synthetic leasing firms						Nonsynthetic leasing firms						p-values	
	Obs	**Mean**	**Median**	**StDev**	**Min**	**Max**	**Obs**	**Mean**	**Median**	**StDev**	**Min**	**Max**	**Mean**	**Median**
CF														
FCF_LEVEL	120	0.475	0.000	0.501	0.000	1.000	2,915	0.433	0.000	0.496	0.000	1.000	0.36	
FCF_FLOW	120	0.813	0.825	0.107	0.000	0.905	2,915	0.742	0.825	0.252	0.000	1.000	0.00	0.35
TOBINQ	120	0.623	0.389	0.652	-0.130	2.620	2,915	0.394	0.251	0.541	-1.048	4.082	0.00	0.00
INVCF	120	0.553	0.561	0.075	0.000	0.620	2,915	0.504	0.559	0.173	0.000	1.000	0.00	0.01
OPAQUE														
LEV_DIFF	120	0.020	0.000	0.051	0.000	0.312	2,915	0.000	0.000	0.000	0.000	0.000	0.00	0.00
BANKRUPT_DIFF	120	0.025	0.000	0.100	0.000	0.926	2,915	0.000	0.000	0.000	0.000	0.000	0.00	0.00
COGS	120	0.230	0.000	0.481	0.000	2.893	2,915	0.220	0.000	0.400	0.000	3.644	0.79	0.92
LABOR	120	0.623	0.666	0.233	0.076	0.994	2,915	0.575	0.611	0.222	0.039	0.996	0.02	0.02
PENSION	120	0.567	1.000	0.498	0.000	1.000	2,915	0.385	0.000	0.487	0.000	1.000	0.00	
NOTEPAY	120	0.035	0.006	0.071	0.000	0.553	2,915	0.030	0.000	0.088	-0.008	2.352	0.58	0.04

Panel B: Univariate comparisons of incentive indices

	Synthetic leasing firms						Nonsynthetic leasing firms						p-values	
	Obs	**Mean**	**Median**	**StDev**	**Min**	**Max**	**Obs**	**Mean**	**Median**	**StDev**	**Min**	**Max**	**Mean**	**Median**
CF	120	0.594	0.603	0.105	0.070	0.884	2,915	0.528	0.572	0.166	0.000	1.000	0.00	0.00
OPAQUE1	120	0.120	0.095	0.116	0.024	1.000	2,915	0.063	0.060	0.035	0.000	0.457	0.00	0.00
OPAQUE2(a)	120	0.160	0.155	0.076	0.015	0.357	2,915	0.138	0.132	0.076	0.000	1.000	0.00	0.00

(a) OPAQUE2 excludes LEV_DIFF and BANKRUPT_DIFF

Table 4: Control variables

These panels contain descriptive statistics of control variables for 120 firms using synthetic leases plus 2,915 firms not using synthetic leases and meeting data requirements. Variables are defined in Appendix B.

Panel A: Control variable distributions

	Observations	Mean	Median	St.Dev	Min	Max
DISTRESS	3,035	0.15	0.00	0.24	0.00	1.00
ANALYST	3,035	1.30	1.30	1.01	0.00	3.64
INSTINV	3,035	0.33	0.29	0.29	0.00	3.02
BKHOLDER	3,035	5.93	0.00	11.70	0.00	90.30
FIRMSIZE	3,035	0.00	-0.14	0.97	-3.46	3.37
PAST_EQUITY	3,035	0.35	0.00	0.40	0.00	1.00
SLSIZE	3,035	22.44	-0.76	523.56	-14,871.19	11,077.91
FA_USED	3,035	2.47	0.32	10.48	0.04	292.78

Panel B: Correlations of incentive and control variables. Bold correlations are significant at 10%

	CF	OPA-QUE2	DIST RESS	ANA LYST	INST INV	BK HLDR	FIRM SIZE	PAST EQTY	SL SIZE
OPAQUE2	**-0.08**								
DISTRESS	**-0.23**	**-0.05**							
ANALYST	**0.28**	**0.12**	**-0.22**						
INSTINV	**0.11**	**0.17**	**-0.18**	**0.41**					
BKHOLDER	-0.01	**0.12**	**-0.08**	**0.23**	**0.35**				
FIRMSIZE	**0.12**	**0.27**	**-0.16**	**0.53**	**0.26**	**0.21**			
PAST_EQUITY	**0.15**	**-0.12**	**0.04**	0.01	**-0.06**	**-0.22**	**-0.09**		
SLSIZE	0.01	0.02	-0.02	0.03	0.00	0.00	**0.10**	-0.02	
FA_USED	**0.05**	**0.05**	**-0.05**	**0.18**	**0.04**	-0.01	**0.46**	-0.01	**0.08**

Table 5: Multinomial logit of the contracting and disclosure choice on incentives and control variables

This table shows the results of a multinomial logit regression evaluating the choices to use and provide informative disclosure about the use of a synthetic lease for 120 firms with synthetic leases and 2,915 firms without synthetic leases. The dependent variable is trichotomous with no synthetic lease (No/SL), synthetic lease plus uninformative disclosure (SL/Low), and synthetic lease plus informative disclosure (SL/High) as the three outcomes. Firms with informative (uninformative) disclosure have OVERALL disclosure scores greater (less) than the median (OVERALL_HI). Variables are defined in Appendix B. Industry fixed effects are included but not reported. Significance levels are indicated by ***, **, and * representing 1%, 5%, and 10% levels, respectively (1-tailed if coefficient predicted, 2-tailed otherwise).

	Marginal Effects			**Tests Across Categories (p-values)**		
	NoSL (1)	**SL/Low (2)**	**SL/High (3)**	**NoSL vs. SL/Low (4)**	**NoSL vs SL/High (5)**	**SL/Low vs. SL/High (6)**
CF (rank 0-1)	-0.0119*	-0.0020	0.0139***	0.66	0.00	0.02
OPAQUE2 (rank 0-1)	0.0017	0.0093**	-0.0110*	0.06	0.07	0.01
DISTRESS (rank 0-1)	0.0063	-0.0027	-0.0035	0.54	0.51	1.00
ANALYST	-0.0117***	0.0062***	0.0055***	0.00	0.00	0.29
INSTINV	0.0033	0.0007	-0.0033	0.83	0.39	0.45
BKHOLDER	-0.0001	0.0000	0.0001	0.72	0.27	0.28
FIRMSIZE	-0.0102***	0.0044***	0.0058***	0.00	0.01	0.95
PAST_EQUITY	0.0006	-0.0011	0.0004	0.68	0.90	0.71
SLSIZE	0.0000	0.0000	0.0000	0.91	0.68	0.90
FA_USED	0.0003	0.0000	-0.0003	0.73	0.33	0.37
N	3,035					
Pseudo R^2	19%					

Table 6: Separate regressions of the contracting and disclosure choice on incentives and control variables

This table shows the selection of a synthetic lease and choice of disclosure, each regressed separately on the incentives and control variables. Panel A provides the selection model. Using a logit specification, the choice to use a synthetic lease is regressed on the incentive variables and control variables for financially distressed firms (DISTRESS) and the level of fixed assets used (FA_USED). Panel B provides the OLS regression of disclosure choice (OVERALL) on the incentive variables and controls for firm disclosure policy and financially distressed firms. Variables are defined in Appendix B. Industry fixed effects are included but not reported. Significance levels are indicated by ***, **, and * representing 1%, 5%, and 10% levels, respectively (1-tailed if coefficient predicted, 2-tailed otherwise).

Panel A: Selection model of the choice to use a synthetic lease using logit

	Marginal Effects
Intercept	-0.1475***
CF (rank 0-1)	0.0430***
OPAQUE2 (rank 0-1)	0.0454***
DISTRESS (rank 0-1)	-0.0330***
FA_USED	0.0004***
Obs. Total	3,035
Pseudo R2	7%
Model	Logit

Panel B: Disclosure choice model of the disclosure choice (OVERALL) using OLS

	Coefficients
Intercept	61.0038**
CF (rank 0-1)	33.8991***
OPAQUE1 (rank 0-1)	-16.6094*
DISTRESS (rank 0-1)	-0.4745
ANALYST	-1.6723
INSTINV	0.7396
BKHOLDER	0.6139
FIRMSIZE	-7.6504
PAST_EQUITY	1.2274
SLSIZE	0.0003
P-value from $\chi 2$ test	
CF> OPAQUE1	0.01
N	120
R^2	19%
Model	OLS

Table 7: FIN 46 adoption choice

Panels A and B show the distribution of observations by data source and across FIN 46 adoption years for 120 firms using synthetic leases. Panel C provides descriptive statistics for the three control variables not used in earlier analyses. Variables are defined in Appendix B.

Panel A: Distribution of adoption outcomes by firm source

Outcome	DealScan	LiveEdgar	Total
Purchase	22 (39%)	30 (47%)	52 (43%)
Consolidate	20 (36%)	22 (34%)	42 (35%)
Restructure	14 (25%)	12 (19%)	26 (22%)
	56	64	120

Panel B: Distribution of adoption years

Adopt Year	Number of Firms
2001 (a)	1
2002	32
2003	83
2004	4
	120

(a) Based on Compustat yeara (date of adoption was after 2/2002, in the fourth fiscal quarter ended 4/2002).

Panel C: Summary of new control variables

	Observations	Mean	Median	Min	Max
NEGPUB	120	0.000	-0.006	-5.369	6.439
COLLATERAL	120	0.113	0.000	0.000	1.000
FCF	120	0.037	0.028	-0.285	0.308

Table 8: Univariate and multivariate tests of FIN 46 adoption

Panel A provides univariate tests of voluntary disclosure and incentive variables across FIN 46 outcome choices for 120 firms using synthetic leases. Panel B provides the results of a multinomial logit regression evaluating FIN 46 adoption choices on voluntary disclosure. The dependent variable indicates consolidation (C), purchase (P), or restructure (R). Variables are defined in Appendix B. Industry fixed effects are included but not reported. The p-values of the t-test of the differences in the means across the samples assume equal variances unless equality is rejected at 10% level. The p-values of tests of differences in the medians across the samples are for a two-sided Wilcoxon rank-sum test. Significance levels are indicated by ***, **, and * representing 1%, 5%, and 10% levels, respectively (1-tailed if coefficient predicted, 2-tailed otherwise).

Panel A: Univariate tests of voluntary disclosure and incentive variables across FIN 46 adoption choices

	Consolidate		Purchase		Restructure		Test of difference p-values mean(median)		
	Mean	**Med**	**Mean**	**Med**	**Mean**	**Med**	**C/P**	**C/R**	**P/R**
Disclosure-Score									
OVERALL	36.83	44.00	33.46	38.00	30.62	36.50	0.47(0.40)	0.28(0.19)	0.58(0.42)
Incentives									
CF	0.61	0.62	0.62	0.63	0.56	0.60	0.58(0.51)	0.14(0.28)	0.05(0.22)
OPAQUE1	0.15	0.10	0.12	0.10	0.08	0.07	0.21(0.62)	0.06(0.05)	0.08(0.09)
No. Obs	42		52		26				
Disclosure-Binary	**High**	**Low**	**High**	**Low**	**High**	**Low**			
OVERALL_HI	23	19	25	27	10	16	0.52	0.19	0.42

Panel B: Multinomial logit regression of FIN 46 adoption choices on voluntary disclosure and control variables

	Marginal Effects			Tests Across Categories (p-values)		
	C (1)	**P (2)**	**R (3)**	**C vs. P (4)**	**C vs. R (5)**	**P vs. R (6)**
OVERALL_HI	0.1452*	-0.1063	-0.0389	0.19	0.29	0.96
NEGPUB	-0.0013	0.0043***	-0.0030**	0.08	0.21	0.01
SLSIZE	0.0000	0.0000	0.0000	0.50	0.26	0.32
FIRMSIZE	0.0650	-0.0980	0.0330	0.20	0.99	0.33
COLLATERAL	-0.0236	0.2947	-0.2711	0.46	0.39	0.16
FCF	-0.6819	0.1842	0.4977	0.38	0.23	0.51
% Predicted Correctly	60%	71%	31%			
Pseudo R^2	14%					

Table 9: Univariate tests of voluntary disclosure about adoption of FIN 46

This table provides comparisons of voluntary disclosure about FIN 46 adoption choices across adoption outcomes for 120 firms using synthetic leases. Variables are defined in Appendix B. The p-values of the t-test of the differences in the means across the samples assume equal variances unless equality is rejected at 10% level. The p-values of tests of differences in the medians across the samples are for a two-sided Wilcoxon rank-sum test. For binary variables, p-values are for a $\chi 2$ test.

	Consolidate				Purchase				Restructure				p-values mean(median)		
	Mean	**Med**	**Min**	**Max**	**Mean**	**Med**	**Min**	**Max**	**Mean**	**Med**	**Min**	**Max**	**C/P**	**C/R**	**P/R**
ADOPT_WDCT	322	290	63	932	158	127	0	486	155	126	0	519	0.00 (0.00)	0.00 (0.00)	0.94 (0.56)
	Yes	**No**			**Yes**	**No**			**Yes**	**No**					
ADOPT_LINK	34	8			10	42			4	22			0.00	0.00	0.68
Observations	42				52				26						