Evidence from Tax-Exempt Firms on Motives for Participating in Sale-Leaseback Agreements

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Abstract   Previous research finds evidence that tax factors motivate the participants in leasing transactions. Tax-arbitrage arguments predict that leasing participants gain when the lessor's tax rate exceeds that of the lessee. This research employs a sample of effectively tax-exempt Real Estate Investment Trust (REIT) lessors to explore alternative leasing motives. Changes in REIT qualification rules are examined to develop an Agency-Cost and competing Income-Retention Hypothesis for lessors. The rules and changes suggest that REIT management has the incentive, motive, and opportunity to make real estate investments quickly. The evidence developed is consistent with agency costs arising from the possibility that they may overpay for properties.

Theoretical models of financial leasing like those developed in Miller and Upton (1976), Lewellen, Long and McConnell (1976), Myers, Dill, and Bautista (1976), Brealey and Young (1980), and Brick, Fung, and Subrahmanyam (1990) highlight differential tax rates between lessors and lessees as a primary motive for leasing. Alvayay, Rutherford, and Smith (1995), Moyer and Krishnan (1995), and Lasfer and Levis (1998) find evidence that tax considerations are an important factor explaining leasing activity. Conversely, Eades and Marston (2002) conclude that their research provides little evidence that taxes drive the leasing decisions of the largest lessors (or lessees). They also note that the tax arbitrage hypothesis predicts that leasing participants benefit when the lessor is in a tax bracket higher than that of the lessee. This research employs a sample of qualified Real Estate Investment Trust (REIT) lessor firms that are effectively ''tax exempt'' (actually they may deduct their dividends for tax purposes) to develop evidence on alternative motives for participating in these sale-leaseback (SLB) transactions. Thus, the standard differential tax model does not adequately account for the interest of REITs in SLB transactions. Two alternative hypotheses are developed in this paper that reflect both the nature of REIT operations and the regulations they must satisfy to remain qualified as REITs.[1]

The first hypothesis is that REIT managers are not clearly acting in their shareholders' best interests by engaging in SLBs and it is termed the Agency-Cost Hypothesis. It reflects the conclusion in Graff (2001:109) that REIT "managers routinely overpay for asset acquisitions." Several observations in Graff lead to this conclusion. First, REIT managers have an incentive to commit capital promptly due to the "75% income test." Second, REIT managers are compensated on the basis of total assets managed. Third, detailed information is not publicly-available that would allow analysts to develop accurate assessments of property valuations. Fourth, the "5-50 test," which was originally designed to expand the number of shareholders, has actually insulated incumbent management from the threat of a takeover by a small group of investors. Finally, many REITs have adopted anti-takeover provisions, which virtually ensure that hostile takeovers as a mechanism to discipline poorly-performing management are impossible.

The second, competing hypothesis is termed the Income-Retention Hypothesis and it suggests a more beneficent management motive for SLBs. The lobbying efforts by the National Association of Real Estate Investment Trusts (NAREIT) to have the minimum required dividend payout ratio to maintain REIT status lowered from 95% to 90% (under the 1999 REIT Modernization Act) suggest that income retention is a matter of considerable importance to REIT management. REITs may deduct their dividends (required to be paid) from before-tax income. Interestingly, they are similar to taxable C-corporations in that they also deduct both depreciation and debt-interest expense from their income.[2] SLB transactions allow REITs to generate both types of deductible expenses, reducing their "taxable" income. However, these SLBs offer several added benefits (described below), compared to purchase-and-lease transactions, which suggests an advantage to SLBs. Market reaction to these SLB announcements from both the REIT lessor and non-REIT lessee perspectives is the focus of this study.

Reaction to SLB announcements for lessors is found to be negative but insignificant. This result is clearly not consistent with the implications of the Income-Retention Hypothesis, but its insignificance does not necessarily support the Agency-Cost Hypothesis. Further analysis using multiple regressions to discriminate between the two hypotheses is shown to provide greater support for the agency-cost explanation.

On the lessee side, two hypotheses are examined that reflect conflicting findings regarding either tax motives or credit availability from previous research. The first motive is termed the Tax-Benefit Hypothesis. It reflects the possibility that the lessees may be able to share the (tax) advantages the REIT lessors gain through SLBs [i.e., depreciation (and possibly interest) deductions]. A second alternative motive for lessees is that SLBs afford them an advantageous way of obtaining needed financing when it is difficult or more costly to obtain from other sources. Event-study market model tests display a significant positive market reaction to SLB announcements for lessee firms. This finding is consistent with previous research and both hypotheses. The multiple regressions used to distinguish between the hypotheses are interpreted as supporting the hypothesis that SLBs

provide lessees the opportunity to obtain needed financing (or clean up their balance sheets) through the monetization of bricks and mortar.

The next section describes the qualifications that REITs must satisfy to maintain their tax-exempt status and provides an overview of sale-leaseback activity. Next is a discussion of previous studies on leasing that are related to this research. The hypotheses, data collection, and the methods of analysis employed are then discussed, followed by an examination of the empirical findings. Finally, the research highlights are presented, along with conclusions regarding the alternative motives for leasing.

Sale-Leaseback Financing and Requirements for REIT Qualification

REIT Qualification Requirements

Real estate investment trust characteristics and qualification requirements are discussed in section 856 of the Internal Revenue Code. A REIT is defined as a corporation that invests principally in real estate and mortgages and elects special tax treatment as a qualified REIT. A REIT may deduct the dividends it distributes to its shareholders from its taxable income, effectively allowing it to serve as a conduit. However, if the trust generates an operating loss, this cannot be passed on to its shareholders as a tax credit (Allen and Sirmans, 1987). Although a REIT must be a corporation for tax purposes, it can be formed as a trust under local law. Most REITs are relatively small corporations[3] and nearly half are not publicly traded.

The most important requirements a corporation must meet to qualify as a REIT may be summarized as follows. The first condition is that REITs have to distribute 90% of their income as cash dividends. The second is that REITs are required to maintain a relatively diverse shareholder base. This ownership requirement prohibits any five or fewer shareholders from owning 50% or more of the REIT's stock (the 5–50 rule). Further, REITs cannot be closely held, as there must be at least 100 shareowners. Third, 75% of the assets must be in the form of mortgages, real estate equities, cash, or government securities. Fourth, a minimum of 75% of REIT gross income must be derived from mortgages, rents, and property sale gains (the 75% income test). Fifth, the REIT must not have accumulated earnings from years when it was not a qualified REIT. Sixth, prior to the REIT Modernization Act of 1986, independent real estate professionals were required to be employed to carry out specific management activities. However, since the enactment of this legislation, REITs have been permitted to manage their own properties (Graff, 2001). Finally, real property should not be owned principally for sale in the course of ordinary business.

If a REIT satisfies the qualifying conditions, it is effectively tax exempt and its shareholders avoid double taxation on corporate distributions. The growth of

REITs as vehicles for real estate investment demonstrates that many investors believe this qualification confers a net tax benefit to shareholders.

Sale-Leaseback Characteristics

The sale-leaseback arrangement has become a popular means of financing real estate for a variety of reasons. This transaction has traditionally been used to create an alternative to mortgage financing of business properties. The most important advantage is that 100% of the purchase price is effectively being loaned, compared to a typical secured loan where 60%–70% of the property's value would serve as the loan basis. In a "properly-arranged" transaction, it can offer both business-economic and tax advantages. Corporations are increasingly realizing that funds invested in real estate can be more effectively deployed in their core businesses and are using sale-leaseback financing to convert bricks and mortar into an additional source of financing. In this sense, the lessor is effectively acting as a lender of financing provided to the lessee.

A real estate sale-leaseback (SLB) typically involves the purchase of a corporate headquarters, distribution facility, manufacturing facility, laboratory, or other physical property by the buyer (lessor) that will continue to be used by the seller (lessee). As part of the arrangement, the former corporate owner leases the facility back from the purchaser for a period of time, typically 10 to 25 years, and the seller retains control of the property. Many SLBs are structured as "triple net," meaning that the seller/lessee remains responsible for all operating expenses, insurance, taxes, and maintenance of the property. The assets sold may consist of a specific property or multiple properties. Although "build-to-suits" are typically used to fund the projects while they are being constructed (due to better tax and financial accounting benefits) SLBs may also be employed to finance projects under construction.[4]

The lessor is typically an established institutional entity, such as a REIT, partnership, or limited liability corporation. If acting in the best interests of its shareholders, the lessor offers a lease rate that reflects their own cost of capital, and conversely the lessee will not borrow from the REIT unless the terms are better than those offered by other lenders. An SLB affords financing equal to 100% of the market value, in contrast to mortgage financing where the amount financed is usually less than property's full value. The SLB thereby frees up cash that may be employed to fund internal expansion, as well for other investment purposes. It may also be used to pay off debt and enhance borrowing capacity. Lessees also obtain operating flexibility, as SLB financing does not impose the operating covenants that traditional financing would (Pappas, 1996). A potential disadvantage to the lessee is that once the SLB is executed, they may not vacate the property as easily (as if they still owned the property) due to the finite lease obligation. Further, any residual property values accrue to the landlord.

Sale-leasebacks are treated as operating leases from an accounting standpoint, meaning they are not shown as a debt obligation on the lessee's balance sheet

provided that they meet certain Financial Accounting Standards Board (FASB) criteria. In addition, the lessee's lease payments are fully deductible and may generate deductions greater than the interest and depreciation deductions that would have been available without the sale. This situation is especially likely when the property sold includes land rather than depreciable assets.

The major non-tax benefit for the lessor is that the return earned on the lease is typically higher than the interest income that would have been received if the transaction had been structured as a loan rather than a sale. The lessor also has recourse to the property if the lessee defaults. How advantageous this repossession is depends on the availability of other lessees, the current value of the property, and the amount of debt service. The tax benefits to the lessor will include the depreciation allowance and the interest deduction on any loan used to purchase the property.

There are several benefits of the SLB to the REIT lessor as compared to outright purchase of the asset and then searching for a tenant. First, since most SLBs are for relatively long terms (10–25 years), the REIT has a long-term tenant guaranteed. Thus, they do not need to purchase the property speculatively and search for a tenant. The immediacy of having a tenant is important in satisfying the 75% income test in light of the required one-year investment horizon. Second, when the REIT (or any other potential lessor) is considering prospective SLB customers, they are able to evaluate the lessee's credit quality on a pre-purchase basis. This provides an advantage in comparison to a situation where the REIT would purchase a vacant property, and then search for a tenant with an unevaluated credit history. This ability to pre-evaluate a potential lessee's credit quality might also allow the REIT to focus on firms with lower credit quality and then conceivably earn higher returns. Finally, if the REIT itself requires financing to execute the SLB, the lease payment (or part of it) can be used to offset the lessor's loan payment, and so the SLB is in that sense self-financing. Further, the size of the REIT portfolio will be increased due to the SLB (generating increased management fees) and it will also benefit from any property value appreciation.

Review of the Literature

Agency Costs of REITs as SLB Lenders

Differential tax rates between lessors and lessees as a primary motive for leasing have been highlighted in theoretical models like those developed in Lewellen, Long, and McConnell (1976), Miller and Upton (1976), Myers, Dill, and Bautista (1976), Brealey and Young (1980), and Brick, Fung, and Subrahmanyam (1990). Tax considerations are found to be an important factor explaining leasing activity in Alvayay, Rutherford, and Smith (1995), Moyer and Krishnan (1995), and Lasfer and Levis (1998). However, as noted by Eades and Marston (2002:7), "The tax hypothesis predicts that firms gain from leasing when the lessor is in the higher

tax bracket than the lessee." Since the tax rate of the REIT lessors in this study is effectively zero, non-tax reasons may be motivating their participation in SLBs.

Several researchers have analyzed the agency costs related to the REIT operating structure or the regulations they must follow to remain qualified for their effectively tax-exempt status. Webb and McIntosh (1986) conclude that REIT share price may, or may not, reflect the value of the underlying assets and this fact may affect REIT managers' investment rules. Cannon and Vogt (1995) consider the possible agency problems between "self-administered" (internally-advised) and "advisor" REITs due to the 1986 REIT Modernization Act (RMA). They find that internally-advised (I-A) REITs outperform those with external management even after adjusting for risk. Mueller (1998) looks at the effects of the 1986 RMA and suggests that growth in total assets does not equal growth in funds from operations. Along this same line, Ambrose and Linneman (2001) document the growth of I-A REITs, but conclude that the evidence is mixed regarding whether they exhibit superior performance compared to those externally-managed.

Graff and Webb (1997) develop evidence of persistence in the annual National Council of Real Estate Investment Fiduciaries (NCREIF) property returns. Their findings suggest that this imposes an agency cost since it implies institutional portfolio assets were acquired at substantially misvalued (i.e., overpriced) prices and this results in underperformance by the investments. Graff (2001) notes that the more restrictive secrecy policies of REITs keeps their investors in even greater ignorance than do the policies of other institutional real estate management. Graff examines the 75% income rule and concludes that it encourages REIT managers to commit capital more promptly than other institutional managers. Further, since REIT management is not required to liquidate properties or return investor capital, he suggests they will attribute a greater present value to the management fees they will collect than do managers of closed-end and open-end funds. The 5–50 test for REIT qualification was meant to ensure a diverse ownership base. Graff points out that an unintended consequence is that it also acts to make it difficult for any dissident group of shareholders to gain majority control and replace entrenched, poorly-performing management without risking the REIT's tax-exempt status. All of these factors combined lead Graff to conclude that REIT management has both the incentive and ability to commit funds to overpriced assets. As developed here, this conclusion should be considered a major, potential agency cost of REITs engaging in SLBs. Indeed, there is evidence in Hardin and Wolverton (1999) and Graff, Slade, and Webb (2000) that REIT purchasers of properties in several markets paid premiums in the range of 26%–32%. Finally, Ang and Friday (2003: 2) examine (equity) REIT governance structure and note that "This group of firms operates in an industry notorious for excessive levels of agency conflicts and inside dealings." They conclude that traditional forms of wealth expropriation are dwarfed by transactions between the firm and firm insiders.

REIT Qualification Requirements and Income Retention

An alternative view of changes in REIT qualification regulations is that they have been enacted to level the playing field and allow REITs to compete more successfully with fully-taxable, open- or closed-end fund institutional real estate investment companies. Prior to the RMA of 1986, REITs were prohibited from self-management. King (1998:37-8) states "this independent contractor requirement was a source of irritation for REITs from the beginning." According to King, this change has fostered both rapid growth for REITs (in the 1990s) and allowed them to become actively-managed operating companies. Chan, Erickson, and Wang (2003) conclude that this change not only provided REIT management the opportunity to improve the efficiency of their operating decisions, but also provided closer alignment of management and shareholder interests. Graff (2001) points out that under the RMA of 1986, REITs are also allowed to apply the earnings from qualified stock and bond investments toward satisfying the 75% test for up to one year. He also states that the intense lobbying efforts by REITs to pass the 1999 REIT Modernization Act and get the 95% minimum dividend payout lowered to 90% demonstrate the value they place on retaining income (deductions in the form of non-cash, depreciation expenses also act to shield income). Further, Graff notes that REITs have an incentive to retain ownership of property that has appreciated, because under the 75% income rule, they are not required to distribute unrealized capital gains (whereas undistributed earnings are taxable). Taken altogether, the ability to self-manage, retain greater income, and an incentive to generate capital gains through investment suggests the possibility that the changes in regulation for which NAREIT has actively lobbied are intended to work in the best interests of REIT management (and then presumably the shareholders).

Leasing from the Lessee's Viewpoint

There are numerous studies of the effects of leasing announcements on the lessee's share price, several of which have been noted previously. One recent study of SLBs by Ezzell and Vora (2001) finds evidence that the relation between the lessee's gain and its tax rate is negative. They also find that gains from SLBs are greater for low-quality firms (or firms with high costs of financing) and firms with greater information asymmetry. Fisher (2004) employs a model predicting that lessees will choose shorter lease terms when the asset in the SLB is relatively more important. She finds a significant positive return for lessee shareholders of firms announcing shorter leases. On the other hand, using a unique dataset of the actual tax rates and indicators of credit strength for the 100 largest lessees (and lessors as well), Eades and Marston (2002) conclude that taxes and access to capital are not strong motives in the demand for leasing. Allen, Rutherford, and Springer (1993) examine real estate leasing from the lessee's viewpoint. They find a significant, positive market response to leasing announcements. Interestingly, this positive reaction is confined to the period prior to the RMA of 1986. They

interpret their findings as evidence of the firm's management acting to maximize shareholder wealth.

Testable Hypotheses, Data Collection, and Method of Analysis

Agency-Cost Hypothesis for Lessors

The lessor firms in this sample consist entirely of REITs, and as long as they satisfy the qualification requirements, they are effectively tax exempt. This fact suggests that motives beyond simple tax arbitrage arguments should be considered to explain their participation in SLBs. As previously described, Graff (2001) notes that under the 75% rule, REIT managers have an incentive to reinvest earnings or investment capital into real estate acquisitions quickly. The present value of future investment fees is also higher for them than the managers of other institutional real estate funds. The 5–50 rule has had the unintended effect of insulating poorly-performing management from hostile takeovers. Investor access to the relevant information needed to develop accurate assessments of REIT property values is more severely limited than by other real estate institutions. When these factors are combined, they suggest incentive, motive, and opportunity for REIT management to acquire properties through SLBs quickly, and overpay if necessary. This potentially creates an important agency cost to be borne by REIT shareholders. Under this Agency-Cost Hypothesis: *Share market reaction is expected to be negative and significant to SLB announcements for REIT lessors.*

Two variables that are meant to reflect these agency-cost effects are employed as proxies (in the multivariate regression analysis). The first variable represents leverage (*LEVG*), which is calculated as total liabilities divided by the book value of equity. This variable is used in many studies as a proxy for an agency problem. The intuition is that the more leverage a firm employs, the greater the monitoring provided by lenders. The expected relationship between the market return and *LEVG* is positive, since greater monitoring should increase the cumulative average abnormal return (*CAAR*), or equivalently, make it less negative. The second variable is the ratio of market-to-book-value, which is often used as a proxy for information asymmetry. This ratio is frequently labeled Tobin's Q (*TQ*) is estimated as the sum of total liabilities and market value of equity (MVE) divided by the book value of total assets (*TA*). The relationship between the *CAAR* and *TQ* is expected to be negative, as higher *TQ* ratios indicate greater information asymmetry. This expectation is in accord with Chan, Erickson, and Wang (2003: 209) who state that "REIT returns appear to be negatively related to their market-to-book value." Less transparent business operations lead to greater potential abuse. This factor is thereby expected to generate a more negative market response.

Income-Retention Hypothesis for Lessors

The National Association of Real Estate Investment Trusts has lobbied actively and successfully for changes in the regulations that qualify REITs to make them more competitive with other real estate investment companies. There are two important changes in the RMA of 1986; namely, the allowance of REITs to manage themselves internally and the expansion of qualified income. Further, the RMA of 1999 lowers the required dividend payout to 90%. Additionally, REITs are allowed to deduct depreciation and interest expenses, thereby reducing "taxable income" and to retain capital gains. The combination of firm control of operations and greater ability to reinvest earnings in themselves suggest that these changes may be motivated by REITs' managements' desire to increase firm value. Thus, REIT management may be acting in the best interests of shareholders by participating in SLBs, given the SLB advantages to REITs compared to normal purchase-and-lease transactions. The Income-Retention Hypothesis may be stated as: *Share market reaction is expected to be positive and significant to SLB announcements for REIT lessors.*

Three variables are employed to test whether the Income-Retention Hypothesis is more consistent with market reaction to announcements of SLBs. Under this hypothesis, lower dividend payouts are important and the first variable represents the dividend payout ratio (*DPR*). It is calculated as dividends paid out divided by net income. The hypothesis suggests that REITs retaining more income (lower *DPR*) should expect a more positive response. This implies there is a negative expected relationship between *DPR* and REIT *CAAR*s. The second variable is return on equity (*ROE*). It is calculated as net income divided by market value of equity. Return on equity is generally regarded as the best indicator of firm performance from the shareholder's perspective. Therefore, in the regressions it is expected to be positively related to market reaction. Depreciation expenses also act to effectively help retain earnings since they are a non-cash deductible expense. A third variable, representing depreciation (*DEPR*), is calculated as depreciation expenses divided by total assets. Firms with greater depreciation expenses are shielding more income. Therefore, this variable should be positively related to market reaction.

Two additional control variables are employed in both lessor regressions: a variable to control for firm size and a variable that reflects the magnitude of the SLB transaction. The natural log of sales[5] (*LNSALES*) is used to reflect firm size. The SLB dollar amount divided by total assets (*AMTR*) is used to represent the relative value of the real estate transaction to the REIT purchaser. Although these variables are not used to distinguish between the two proposed hypotheses, it is expected that SLB announcements will generate a larger share price reaction for smaller firms (negative relation) and when the amount of the deal is larger (positive relation).

Tax-Benefit Hypothesis for Lessees

Ezzell and Vora (2001) examine the idea that when the lessor firm has a comparative advantage in utilizing tax-shield deductions, lessees gain from SLB transactions. As noted here, although qualified REITs are effectively tax exempt, this does not mean that they do not avail themselves of deductible expenses to decrease the income they are required to pay out under the 90% dividend payout rule. The benefits to REITs of SLBs (vs. traditional purchase-and-lease investments) have been described above and SLBs do generate these deductible expenses. Thus, it is possible that the tax-related benefits accruing to REITs may be shared with the lessees given that this transaction will be pre-arranged with the lessee's tax situation being fully known. The Tax-Benefit Hypothesis is then stated as: *The announcement of a SLB transaction is expected to generate a significant, positive reaction for the lessee if the market expects the tax advantages to be shared between the lessee and lessor.*

The competing hypothesis developed for the lessee (in the next sub-section) also predicts a positive market response to lessee SLB announcements. Therefore, several variables are proposed to distinguish between the two hypotheses. First, if taxes are a motivating factor, then the lessee's actual tax rate seems an obvious choice for an explanatory variable. A proxy variable termed *TAXRATE* is calculated as tax liability divided by net (after-tax) income.[6] The lease payments arising from the SLB will be a deductible expense to the lessee and should be relatively more valuable to firms paying higher taxes. Thus, there is expected to be a positive relationship between market reaction and *TAXRATE*. Second, depreciation (*DEPR*) is similarly a tax-deductible expense. However, lessees that already have a large amount of depreciation to deduct may have less potential to utilize increased lease payment deductions. This reasoning suggests a negative expected relation between depreciation and market reaction. Third, *LEVG* is included as a variable to represent outside monitoring especially with regard to firms with greater information asymmetry as represented by *TQ*. The expected signs and calculation approach are the same as previously described for the lessor model.

Obtaining-Financing Hypothesis for Lessees

Sale-leasebacks allow the property-selling firm (the SLB lessee) the opportunity to convert bricks and mortar into cash. For firms with growth opportunities, this is clearly a method of obtaining additional financing without resorting to either added borrowing or selling new equity. If market participants perceive that the announcement to lend is a signal of firm quality and its creditworthiness, and believe this financing will be invested in positive net present value projects, then announcements of SLBs should generate a positive response. The Obtaining Financing Hypothesis follows: *The announcement of a SLB transaction is expected to generate a significant, positive reaction for the lessee if the market believes the proceeds will finance profitable investments.*

The explanatory variables used to provide evidence on this hypothesis are chosen to reflect the lessee's creditworthiness from the lessor's perspective. The first variable reflects whether or not the lessee's debt is rated (*RATD*). Since firms incur a significant cost to have their debt rated, those that choose to do so would presumably be more creditworthy. Rated lessees are expected to be able to obtain a better deal from the lessor. Thus, the relationship between *RATD* and market reaction is expected to be positive. A dummy variable, *RATD*, takes the value of one if the debt is rated and is zero otherwise. A dummy variable is used instead of the actual rating points because there are a significant number of companies that are not rated. Lessee profitability (represented by *ROE*), liquidity (current ratio), and ability to service debt (times interest earned) are also aspects of the lessee's creditworthiness the lessor would possibly wish to evaluate. For each of these three variables, a higher number is a positive indicator and each is expected to be positively related to market reaction. The current ratio (*CRATIO*) is calculated as current assets divided by current liabilities. Times interest earned (*TIE*) is proxied by net income divided by debt interest expense. A final aspect of the lessee's financial position is the cost of funds (*COF*). Lessees that are less creditworthy are expected to have a relatively higher cost of borrowing. Using the intuition developed above, less creditworthy borrowers should be less able to extract favorable terms from the lessor. Thus, there is expected to be a negative relationship between *COF* and market reaction; *COF* is represented by debt interest expense divided by total liabilities. *LNSALES* and *AMTR* are used as control variables in both lessee regression models, as was the case in the lessor regressions, and they are calculated in the same way.[7]

Data Description

Companies included in this study announced a SLB transaction between January 1987 and December 1999 in the United States. An initial search of domestic SLB real-estate transactions was conducted using *Moody's Bank & Finance Manual, Reuters' Business Briefing, Dow Jones Interactive, Factiva*, and the *Wall Street Journal Index*, and produced 250 transactions. All lessors are required to be REITs, which reduces the sample to 126 announcements, whereas all lessees are required to be non-REITs for inclusion in the sample. One hundred and four SLB announcements in the final sample satisfy the following additional criteria. The announcement date is stated in the sources described above. Daily prices are available from CRSP for the period from 250 days before to 20 days after the announcement date. No other confounding events (merger announcements, share repurchase announcements, earnings announcements, etc.) occur within the five-day window centered on the announcement date.

As is shown in Exhibit 1, the final sample of 104 announcements consists of 54 identifiable lessee firms and 92 announcements by identifiable lessors.[8] As a matter of interest, the general types of properties involved in the announcements are healthcare facilities and retirement units (*HCF*), hotels and restaurants (*HR*),

Exhibit 1 | Distribution of Announcements by Years

| | Lessee Distribution | | Lessor Distribution | | Type | | | | | | | | | | | | | |
| | | | | | HCF | | HR | | IMF | | OB | | DS | | T | | O | |
Year	N	%	N	%	LSE	LSO	LSE	LSO	LSE	LSO	LSE	LSO	LSE	LSO	LSE	LSO	LSE	LSO
1987	2	3.7	2	2.2	2	2	—	—	—	—	—	—	—	—	—	—	—	—
1988	2	3.7	4	4.3	2	2	—	—	—	—	—	—	—	2	—	—	—	—
1989	1	1.9	2	2.2	1	2	—	—	—	—	—	—	—	—	—	—	—	—
1990	—	—	3	3.3	—	2	—	—	—	—	—	—	—	1	—	—	—	—
1991	—	—	4	4.3	—	2	—	—	—	—	—	—	—	2	—	—	—	—
1992	1	1.9	2	2.2	1	2	—	—	—	—	—	—	—	—	—	—	—	—
1993	2	3.7	2	2.2	—	1	—	—	—	—	1	—	1	1	—	—	—	—
1994	—	—	4	4.3	—	1	—	—	—	—	—	—	—	2	—	—	—	1
1995	3	5.6	4	4.3	3	4	—	—	—	—	—	—	—	—	—	—	—	—
1996	9	16.6	11	12	8	8	—	—	—	1	—	—	1	1	—	1	—	—
1997	17	31.5	21	23	6	7	4	3	1	5	5	6	1	—	—	—	—	—
1998	13	24	20	21.7	3	2	5	7	1	—	2	4	1	1	1	3	—	3
1999	4	7.3	13	15	2	4	—	—	—	2	1	1	1	6	—	—	—	—
Total	54	100	92	100	28	39	9	10	2	8	9	11	5	16	1	4	—	4

Notes: The total sample of 54 lessee and 92 lessor announcements are collected over the period of 1987 to 1999. *N* is the number of announcements in a particular year and % shows the proportion they represent of the total. Type describes the kind of property involved in the announcement. *HCF* stands for healthcare facilities; HR is a hotel or restaurant; IMF is industrial and manufacturing facilities; OB is office buildings; DS is a department store or shopping center; T is a theatre; O represents others; LSE is lessee; and SO is lessor

industry and manufacturing facilities (*IMF*), office buildings, headquarters and corporate campuses (OB), department stores, shopping centers and distribution facilities (*DS*), theatres (*T*), and others, which includes golf courses and school properties (*O*). Exhibit 1 shows that the majority of properties with known lessors or lessees are healthcare or retirement facilities. It may also be noted that the bulk of the transactions in the sample occur after 1995.

Exhibit 2 provides summary statistics of the lease characteristics and selected variables used in testing the hypotheses. The variable definitions follow. The amount (*AMT*) is the sale price of the property as reported in *Moody's, Reuters',* or *The Wall Street Journal*. Maturity (*MAT*) is the lease agreement period in years and is gathered from the same sources. Total assets (*TA*) and market value of equity (*MVE*) are taken from *Moody's* and DataStream. Market value of equity equals the average share price multiplied by the number of shares the year before the announcement.

Method of Analysis

Ball and Brown (1968) originally develop the event-study method of analysis in a seminal paper, and it is further evaluated by Brown and Warner (1985). The event-study method is used to estimate the market reaction to SLB announcements from both the lessor and lessee perspectives. Under this method, abnormal returns are estimated with the simple market model, i.e., daily observed returns are assumed to conform to the following structure:

Exhibit 2 | Summary Statistics for the Descriptive Variables

Variable	N	Mean	Median	Std. Dev.	Min.	Max.
Lessee						
Amount of the Deal ($m)	54	62.93	29.09	96.86	2.2	480
Maturity of Leasing (years)	31	15.49	15	5.15	7	30.00
Total Assets ($m)	54	887.57	450.04	1,324.70	33.18	6,804.02
Market Value of Equity ($m)	54	615.59	220.85	1,532.98	29.65	8,107.34
Lessor						
Amount of the Deal ($m)	92	42.85	22.50	71.56	1.08	480
Maturity of Leasing (years)	54	14.50	15	5.32	3	30
Total Assets ($m)	92	961.16	758.84	783.54	148.56	4,179.98
Market Value of Equity ($m)	92	53,557	499.91	222,451	48.44	1,033,660

Notes: Variable refers to the specific balance sheet category depicted. *N* is the number of lessee and lessor firms involved in sale-leaseback announcements for which the descriptive statistics are provided. The amounts for total assets and market value of equity represent the values the year of the announcement.

$$R_{j,t} = \alpha_j + \beta_j R_{m,t} + \varepsilon_{j,t}, \tag{1}$$

where: $R_{j,t}$ = The continuously-compounded rate of return on security j on day t;

$R_{m,t}$ = The rate of return on the CRSP value-weighted market index on day t;

α_j = The intercept of the linear relationship for security j;

β_j = The slope of the linear relationship between security j and the return on the market index; and

$\varepsilon_{j,t}$ = The unexplained or ''abnormal'' return ($A_{j,t}$) on day t.

The coefficients α_j and β_j are estimated with an OLS regression using 160 returns from trading day $t-250$ through trading day $t-90$ relative to the announcement date $t=0$. The returns on day $t-1$ through day $t+1$ are designated to capture the market reaction to the SLB announcement. The average abnormal return (AAR_t) for event date t is calculated as a simple cross-sectional average over N firms in the sample, as shown in Equation (2). The cumulative average abnormal return ($CAAR_{T1,T2}$) is then computed as the sum over several event days, i.e., accumulating from days $T1$ to $T2$ inclusive, and it is shown in Equation (3).

$$AAR_t = \left[\frac{1}{N} * \sum_{j=1}^{N} Aj,t \right]. \tag{2}$$

$$CAAR_{T1,T2} = \left[\frac{1}{N} * \sum_{j=1}^{N} \sum_{t=T1}^{T2} Aj,t \right]. \tag{3}$$

The standardized cross-sectional method is utilized to develop statistics testing for the significance of the abnormal and cumulative average abnormal returns. Boehmer, Musumeci, and Poulsen (1991) introduce this test and document its empirical properties. The reasons for adopting these procedures are first, this test accounts for serial dependence of the abnormal returns accumulated over different intervals. More specifically, the standardized cross-sectional approach test statistic accounts for the fact that, within the window, the abnormal returns for each stock are serially correlated. The serial correlation occurs because all of the abnormal returns are a function of the same market model intercept and slope estimators. Second, the test accounts for the possibility of an increase in event date variance especially using daily return data. This issue is discussed in Sanders and Robins (1991). Cowan (1992), Mann and Sicherman (1991), and Lee (1992) all utilize the same approach. To test for the percentage of positive abnormal returns relative to the percentage of negative, the generalized sign test (binomial sign test) is utilized. The null hypothesis for the generalized sign test is that the fraction of

positive returns is the same as in the estimation period. This same test is utilized by Chen, Hu, and Shieh (1991) and Cowan (1992).

Cross-Sectional Multivariate Regression Tests

For lessors and lessees, two multiple regression models are employed in an attempt to distinguish between the proposed hypotheses. In these regressions, the dependent variable is either the two- or three-day CAAR (results for both are reported in the tables). The expectations regarding the independent variables are discussed above. For lessors, the model testing the Agency-Cost Hypothesis is shown in Equation (4), while the Income-Retention Hypothesis model is shown in Equation (5).

$$CAAR = \alpha_0 + \alpha_1(LNSALES) + \alpha_2(AMTR) \quad (4)$$
$$+ \alpha_3(LEVG) + \alpha_4(TQ) + \varepsilon.$$
$$CAAR = \beta_0 + \beta_1(LNSALES) + \beta_2(AMTR) + \beta_3(DPR) \quad (5)$$
$$+ \beta_4(ROE) + \beta_5(DEPR) + \phi.$$

The two regression models from the lessee side are shown below. The model in Equation (6) is used to provide evidence on the variables for the Tax-Benefit Hypothesis,[9] while the Obtaining-Financing Hypothesis model is depicted in Equation (7).

$$CAAR = \alpha_0 + \alpha_1(LNSALES) + \alpha_2(AMTR)$$
$$+ \alpha_3(TAXRATE) + \alpha_4(DEPR) + \alpha_5(LEVG)$$
$$+ \alpha_6(TQ) + \varepsilon. \quad (6)$$
$$CAAR = \beta_0 + \beta_1(LNSALES) + \beta_2(AMTR) + \beta_3(RATD)$$
$$+ \beta_4(ROE) + \beta_5(CRATIO) + \beta_6(TIE)$$
$$+ \beta_7(COF) + \phi. \quad (7)$$

The independent variables are as defined previously and ε (ϕ) is the error term. In the reported results, the traditional t-test is supplemented by the White (1980) test statistic. This test employs a consistent variance/covariance matrix, which has been corrected for potential heteroscedasticity in the cross-sectional CAARs.

Empirical Results

Results from the Market Model

Exhibits 3 and 4 report the market reaction to the SLB announcements for the 92 lessor and 54 lessee firms, respectively. The two exhibits report the average abnormal return (AAR), median abnormal return (MAR), and the Z-Statistic testing if the AAR is significantly different from zero. Exhibits 3 and 4 also report the number of positive versus negative abnormal returns (Pos:Neg), and the generalized sign Z-test, which considers the significance of the difference between positive versus negative returns. The exhibits also report the CAAR and median cumulative abnormal return (MCAAR) for six different intervals.

Exhibit 3 shows that for the lessor, the announcement period two-day CAAR (*CAAR2*) is −0.08% with a Z-Statistic of −0.45, which is not statistically significant. The number of positive returns is 42 relative to 50 negative returns. The proportion of positive to negative returns has a generalized sign Z of −0.28, which is not statistically significant. A similarly insignificant result is found for the three-day CAARs (*CAAR3*). These negative returns are consistent with the Agency-Cost Hypothesis; however, their insignificance does not lend confirmatory support for this hypothesis.

Exhibit 4 shows that the announcement period two-day CAAR for the lessee is 4.03% with a Z-value of 4.08, which is statistically significant at the 0.1% level. The number of positive returns is 37 relative to 17 negative returns. The proportion of positive returns has a generalized sign Z of 2.92, which is statistically significant at the 1% level, indicating that the results are not induced by outliers. The three-day CAAR is similarly positive and significant. These results are also consistent with the findings of Slovin, Sushka, and Polonchek (1990) and Ezzell and Vora (2001). Cross-sectional multivariate regressions are employed for both lessors and lessees in an attempt to provide clearer support for one hypothesis or the other.

Results for the Cross-Sectional Regressions

Agency-Cost Hypothesis for Lessors. The results of the cross-sectional, multivariate regressions are shown in Exhibit 5 for the lessor. The results for both the two-day (*CAAR2*) and the three-day, (*CAAR3*) CARR are shown. The exhibit shows estimated parameter coefficients, the *t*-test statistic and White statistic testing whether the parameter estimates are significantly different from zero, as well as the *F*-value, the adjusted R^2, and the number of observations used in the regression. The results for the Agency-Cost Hypothesis are shown in the top section of the exhibit.

The regressions with *CAAR2* and *CAAR3* as the dependent variables show that the parameter estimates for *LEVG* are positive as predicted under the Agency-

Exhibit 3 | Average, Median, and Cumulative Average Abnormal Returns Around the SLB Announcement Period for the Lessor

Day	Average Abnormal Return	Median Abnormal Return	Z	N	Pos:Neg	Generalized Sign Z
−20	−0.12%	−0.15%	−0.90	92	38:54	−1.12
−15	0.05%	−0.11%	0.23	92	38:54	−1.12
−10	−0.24%	−0.15%	−1.82	92	38:54	−1.12
−9	−0.15%	−0.18%	−0.69	92	37:55	−1.33
−8	−0.02%	−0.03%	−0.11	92	43:49	−0.07
−7	0.19%	0.19%	1.28	92	51:41	1.60
−6	0.13%	−0.08%	0.16	92	42:50	−0.28
−5	0.14%	0.09%	1.06	92	50:42	1.39
−4	−0.09%	−0.10%	−0.54	92	38:54	−1.12
−3	0.05%	−0.03%	1.00	92	45:47	0.34
−2	0.06%	−0.03%	0.66	92	44:48	0.14
−1	0.07%	−0.14%	0.40	92	40:52	−0.70
0	−0.16%	−0.11%	−0.84	92	39:53	−0.91
1	0.02%	−0.15%	0.30	92	39:53	−0.91
2	−0.09%	−0.09%	−0.99	92	43:49	−0.07
3	0.19%	0.07%	0.97	92	50:42	1.39
4	−0.09%	−0.15%	−0.47	92	37:55	−1.33
5	0.28%	0.12%	1.45	92	50:42	1.39
6	0.07%	0.04%	0.43	92	46:46	0.55
7	0.03%	−0.08%	0.17	92	43:49	−0.07
8	−0.14%	−0.06%	−0.76	92	40:52	−0.70
9	−0.29%	−0.15%	−1.16	92	41:51	−0.49
10	0.19%	−0.04%	1.01	92	44:48	0.14
15	0.04%	−0.04%	0.02	91	39:52	−0.81
20	0.03%	−0.09%	0.03	91	41:50	−0.39

Days	CAAR	MCAAR	Z	Pos:Neg	Generalized Sign Z
(−1,0)	−0.08%	−0.06%	−0.45	42:50	−0.28
(−1,+1)	−0.07%	−0.03%	−0.16	46:46	0.55
(−5,+5)	0.38%	0.04%	1.18	49:43	1.18
(−20,−2)	−0.09%	−0.10%	0.15	45:47	0.34
(+2,+20)	−0.48%	−0.68%	−1.08	40:52	−0.70
(−20,+20)	−0.64%	−0.69%	−0.74	41:51	−0.49

Notes: Average and median abnormal returns are from the market model using the Standardized Residual Method for the final sample of 92 lessor firms. *Z* is the statistic testing for a significant difference of the average abnormal return from zero. *N* is number of firm returns for a given day. Pos:Neg shows how many of the firm returns are positive or negative on a specific day. Generalized Sign *Z* is the non-parametric test statistic for a significant difference from zero, which considers the ratio of positive to negative returns. CAAR is the cumulative average abnormal return and MCAAR is the median cumulative average abnormal return.
* Significant at the 5% level.
** Significant at the 1% level.
*** Significant at the 0.1% level.

Cost Hypothesis, and the coefficients are significant based on both the *t*-test and the White test statistics. The *TQ* parameter estimate is not found to be significant, although its sign is correct for *CAAR3*, but not *CAAR2*. Additionally, the signs for both the *LNSALES* and *AMTR* variables are as expected, although they are not significant. The *F*-test values for both regressions are significant at the 1% level. The adjusted R^2 values show that the regressions explain about 11%–12% of the variability in the dependent variable, which suggests reasonable explanatory ability, compared to regression results in similar studies. These results are interpreted as supporting the agency-cost theory for lessor motives in engaging in SLBs.

Income-Retention Hypothesis for Lessors. The regression model results portraying the Income-Retention Hypothesis are shown in the bottom section of Exhibit 5. The firm size (*LNSALES*) and SLB amount variables (*AMTR*) again have the expected signs and are similarly insignificant. The DPR parameter estimate is positive and significant at either the 1% or 0.1% level based on the two- or three-day CAARs, using both the *t*-test and White test. However, this result does not support the Income-Retention Hypothesis, since it suggests that the market responds positively to firms paying out more dividends. The significant, negative parameter estimates for DEPR also do not provide support for this hypothesis as they suggest that lower depreciable expenses are associated with greater market reaction. The lack of support for this hypothesis is highlighted by the fact that both of these regression models are significant based on their *F*-values. Further, the two-day and three-day models both exhibit reasonable explanatory ability as their adjusted R^2 values squares are 0.12 and 0.19, respectively.

Tax-Benefit Hypothesis for Lessees. The Tax-Benefit Hypothesis cross-sectional, multivariate regression results for the lessee are shown in the upper section of Exhibit 6. The parameter estimates for the relative amount of the SLB variable

Exhibit 4 | Average, Median, and Cumulative Average Abnormal Returns Around the SLB Announcement Period for the Lessee

Day	Average Abnormal Return	Median Abnormal Return	Z	N	Pos:Neg	Generalized Sign Z
−20	−0.09%	0.10%	0.46	54	28:26	0.47
−15	0.51%	−0.12%	0.39	54	25:29	−0.34
−10	1.25%	0.05%	1.60	54	28:26	0.47
−9	−0.12%	−0.49%	0.29	54	22:32	−1.16
−8	0.31%	0.20%	0.47	54	34:20	2.11*
−7	0.11%	0.25%	0.65	54	33:21	1.83
−6	−0.16%	−0.21%	−0.03	54	24:30	−0.62
−5	−0.28%	−0.05%	−0.80	54	27:27	0.20
−4	0.28%	−0.06%	0.33	54	25:29	−0.34
−3	−0.15%	0.07%	−0.09	54	27:27	0.20
−2	−0.32%	−0.17%	−0.57	54	26:28	−0.07
−1	1.78%	0.42%	3.23**	54	33:21	1.83
0	2.26%	0.92%	3.30***	54	36:18	2.65**
1	1.13%	0.36%	2.04*	54	33:21	1.83
2	0.34%	0.17%	1.25	54	30:24	1.02
3	−0.31%	−0.13%	−0.29	54	25:29	−0.34
4	−0.54%	−0.60%	−1.74	54	22:32	−1.16
5	−0.40%	−0.22%	−1.14	54	23:31	−0.89
6	−0.03%	−0.32%	−0.72	53	22:31	−1.04
7	−0.36%	−0.22%	−0.44	54	23:31	−0.89
8	−0.26%	−0.45%	0.21	54	22:32	−1.16
9	−0.37%	−0.21%	−0.57	54	23:31	−0.89
10	−0.89%	−0.74%	−1.24	54	23:31	−0.89
15	0.48%	−0.24%	0.66	54	24:30	−0.62
20	0.31%	0.34%	1.28	54	29:25	0.74

Days	CAAR	MCAAR	Z	Pos:Neg	Generalized Sign Z
(−1,0)	4.03%	1.90%	4.08***	37:17	2.92**
(−1,+1)	5.16%	2.94%	4.29***	39:15	3.47***
(−5,+5)	3.78%	3.75%	2.42*	33:21	1.83
(−20,−2)	0.58%	1.00%	0.13	28:26	0.47
(+2,+20)	−3.51%	−3.10%	−1.16	19:35	−1.98*
(−20,+20)	2.23%	1.46%	0.56	31:23	1.29

Exhibit 4 | (continued)

Average, Median, and Cumulative Average Abnormal Returns Around the SLB Announcement
Period for the Lessee

Notes: Average and Median Abnormal Returns are from the Market Model using the
Standardized Residual Method for the final sample of 54 lessee firms. *Z* is the statistic testing for a
significant difference of the average abnormal return from zero. *N* is number of firm returns for a
given day. Pos:Neg shows how many of the firm returns are positive or negative on a given day.
Generalized Sign *Z* is the non-parametric test statistic for a significant difference from zero which
considers the ratio of positive to negative returns. CAAR is the cumulative average abnormal
return and MCAAR is the median cumulative average abnormal return.
* Significant at the 5% level.
** Significant at the 1% level.
*** Significant at the 0.1% level.

(*AMTR*) is significant at the 0.1% level for both the *CAAR2* and *CAAR3*
regressions based on both the *t*-test and White test statistics. Thus, there is a strong
positive relationship between the size of the SLB deal and share price reaction.
However, while the *LNSALES* variable does not have the expected negative sign,
none of the parameter estimates are significant. The sign of the *TAXRATE* proxy
variable is positive as expected under the Tax-Benefit Hypothesis; however, it is
insignificant in both regressions. This finding does not suggest that market reaction
is driven by the lessee's tax status, and is in accord with the results in Eades and
Marston (2002). The *LEVG* variable has the expected sign but it is not significant.
The *TQ* variable is negative as expected and is significant at the 5% level in the
three-day CAAR regression, based on both the *t*-test and White test statistics. This
finding shows there is a more positive market response for SLB lessees, which
are characterized here as having less information asymmetry. Both regressions
exhibit significant *F*-test values and relatively high adjusted R^2 values, which is
especially pronounced in the *CAAR2* case.

Obtaining-Financing Hypothesis for Lessees. The results of the lessee, cross-
sectional, multivariate regressions testing the Obtaining-Financing Hypothesis are
shown in the lower section of Exhibit 6. The AMTR parameter estimate is positive
as expected and is significant at the 0.1% level in both the *CAAR2* and *CAAR3*
regressions. The size control variable (*LNSALES*) exhibits significance at the
10% level; generally, however, its sign is unexpectedly positive. The parameter
estimates for both the rated debt (*RATD*) and current ratio (*CRATIO*) variables
have the expected positive sign and are significant (at levels ranging from 1% to
10%) in both regressions. Further, the cost of funds regression coefficients are
negative as expected, but they are not found to exhibit significance. These findings
are generally supportive of the predictions developed for the Obtaining-Financing
Hypothesis. Conversely, the significant, negative coefficients for the ROE variable

Independent Variable	Sign	CAAR2			CAAR3		
		Par. Est.	t-Stat	White Test	Par. Est.	t-Stat	White Test
Panel A: Agency Cost Hypothesis							
Intercept	NA	0.000	0.02	0.02	0.000	−0.03	−0.03
LNSALES	−	−0.003	−1.14	−1.57	−0.002	−0.74	−1.03
AMTR	+	0.016	0.81	0.99	0.037	1.61	1.49
LEVG	+	0.009	3.26****	4.04****	0.010	3.04**	3.15****
TQ	−	0.002	0.26	0.29	−0.002	−0.26	−0.30
F-Value		3.64***			3.37***		
R^2		0.1703			0.1594		
Adj. R^2		0.1235			0.1121		
Panel B: Income Retention Hypothesis							
Intercept	NA	0.005	0.33	0.48	0.006	0.41	0.57
LNSALES	−	−0.002	−0.98	−1.44	−0.002	−0.67	−0.93
AMTR	+	0.009	0.45	0.57	0.029	1.36	1.30
DPR	−	0.006	3.24***	9.68****	0.007	3.59****	11.52****
ROE	+	0.034	0.50	0.47	−0.008	−0.11	−0.13
DEPR	+	−0.264	−1.42	−1.65*	−0.509	−2.44**	−2.53**
F-Value		3.01**			4.45****		
R^2		0.1769			0.2413		
Adj. R^2		0.1181			0.1871		

Exhibit 5 | (continued)

Cross-Sectional Multivariate Regression Results for Lessor Announcement Day Returns

Notes: The dependent variables are the two-day (day $t = 0$, day $t+1$) and three-day ($t-1$, $t+1$) cumulative average abnormal return (CAAR2) and (CAAR3), respectively, for lessor sale-leaseback announcements. For both panels, $N = 75$. Sign is the expected sign of each independent variable. Par. Est. is the parameter estimate. *LNSALES* is the natural log of sales. *AMTR* is the ratio of the loan amount to total assets (*TA*). *LEVG* equals total liabilities divided by book value of equity. *TQ* is Tobin's Q, which is the sum of total liabilities and market value of equity (*MVE*) divided by book value of TA. *DPR* is dividend payout ratio found as dividends divided by net income. *ROE* is return on equity calculated as net income divided by *MVE*. *DEPR* is depreciation divided by *TA*.

* Significant at the 10% level.

** Significant at the 5% level.

*** Significant at the 1% level.

**** Significant at the 0.1% level.

Independent Variable	Sign	CAAR2			CAAR3		
		Par. Est.	*t*-Stat	White Test	Par. Est.	*t*-Stat	White Test
Panel A: Tax Benefit Hypothesis							
Intercept	NA	−0.090	−2.16*	−2.25*	−0.065	−1.59	−1.50
LNSALES	−	0.010	1.58	1.78	0.009	1.53	1.52
AMTR	+	0.173	5.54***	9.28***	0.104	3.42***	8.01***
TAXRATE	+	0.002	0.66	1.39	0.002	0.75	1.50
DEPR	−	0.448	1.15	1.15	0.452	1.19	1.06
LEVG	+	0.000	0.01	0.02	0.002	0.94	1.05
TQ	−	−0.003	−0.83	−1.33	−0.007	−2.09*	−3.26*
F-Value		5.68***			2.92*		
R^2		0.4366			0.2851		
Adj. R^2		0.3598			0.1876		
Panel B: Obtaining Financing Hypothesis							
Intercept	NA	−0.122	−3.03**	−2.93**	−0.116	−2.39*	−2.53*
LNSALES	−	0.010	1.69*	1.79*	0.014	1.93*	2.19*
AMTR	+	0.185	7.57***	11.49***	0.115	3.92***	8.02***
RATD	+	0.048	2.65*	3.18**	0.038	1.74$	2.08*
ROE	+	−0.074	−2.04*	−1.56*	−0.075	−1.72$	−1.00
CRATIO	+	0.015	2.49*	1.99*	0.014	1.84$	1.62
TIE	+	−0.0004	−0.15	−0.20	−0.004	−1.46	−1.64
COF	−	−0.222	−0.46	−0.58	−0.341	−0.59	−0.72
F-Value		9.27***			3.37**		
R^2		0.6432			0.3960		
Adj. R^2		0.5738			0.2768		

Exhibit 6 | (continued)

Cross-sectional Multivariate Regression Results for Lessee Announcement Day Returns

Notes: The dependent variables are the two-day (day $t = 0$, day $t+1$) and three-day ($t-1$, $t+1$) cumulative average abnormal return (CAAR2) and (CAAR3), respectively, for lessee sale-leaseback announcements. For Panel A, $N = 50$, for Panel B, $N = 43$. Sign is the expected sign of each independent variable. Par. Est. is the parameter estimate. N is the number of announcements in a given category. *LNSALES* is the natural log of sales. AMTR is the ratio of the loan amount to total assets (TA). *TAXRATE* is calculated as tax liability divided by net income. DEPR is depreciation divided by TA. LEVG equals total liabilities (TL) divided by book value of equity. TQ is Tobin's Q, which is the sum of total liabilities and market value of equity (MVE) divided by book value of TA. RATD is a dummy variable which takes the value one if the lessee's debt has a credit rating and is zero otherwise. ROE is return on equity calculated as net income divided by MVE. CRATIO is the current ratio calculated as current assets divided by current liabilities. TIE is times interest earned and is calculated as net income divided by debt interest. COF is a measure of the cost of funds found as debt interest divided by TL. NA indicates not applicable.
* Significant at the 10% level.
** Significant at the 5% level.
*** Significant at the 1% level.
**** Significant at the 0.1% level.

are contrary to expectations, and suggest that less profitable firms are perceived to benefit more from their participation in SLBs.[10] The *F*-test values are significant at the 0.1% level for both regressions. The adjusted R^2 values are 0.57, and 0.28, for the two-day, and three-day model, respectively, indicating very respectable levels of explanatory power for the regressions.

Conclusion

Previous research has found mixed evidence that tax factors motivate the participants in leasing transactions. Tax-arbitrage arguments suggest that leasing decisions are motivated by situations where the lessor's tax rate is higher than that of the lessee. This study employs a sample of lease transaction announcements where the REIT lessors may be characterized as effectively tax-exempt in an attempt to examine non-tax lessor motives.

Changes in the REIT qualification regulations are examined to develop possible lessor rationales linked to either agency-cost considerations or the desire to retain more income for reinvestment purposes. A line of reasoning is developed showing that four factors provide REIT management with motive, incentive, and opportunity to make property investments quickly. They may in fact allow and encourage REITs to overpay for property investments. If this behavior characterizes REIT participation as SLB lessors, it suggests that shareholders may be bearing agency costs from these transactions. This rationale is thereby termed the Agency-Cost Hypothesis. An alternative view of the REIT qualification rule changes is developed, which suggests that the changes are meant to increase both management effectiveness and the ability to retain income, which is termed the Income-Retention Hypothesis. If REITs invest these funds in profitable SLB investment projects, this suggests a beneficial motivation for these transactions.

The event-study results are inconclusive regarding lessor motives, as the two-day and three-day CAARs are found to be negative, but they are not statistically significant. The multivariate regression results for the Agency-Cost Hypothesis are consistent with the expectations as developed. These results support the conclusion that market reaction reflects lower expected agency costs in the presence of greater monitoring by outside lenders. By comparison, the regression results do not support the implications developed under the Income-Retention Hypothesis. The findings in this case, in fact, show positive market response to SLB announcements for lessors with both lower deductible depreciation expenses and larger dividend payouts. These findings are clearly inconsistent with retaining income.

Previous research findings on possible lessee motives like gaining tax-related benefits or obtaining additional funding is mixed, so this research employs a sample developed to re-examine these explanations. Market reaction to SLB announcements for lessee firms is found to be both positive and significant. Two-day (three-day) announcement period cumulative average abnormal returns are in excess of 4% (5%). Since this finding is consistent with both explanations,

multiple regression models are employed to generate evidence supporting either tax benefits or obtaining financing. The Tax-Benefit Hypothesis regression variables representing firm tax rate and depreciation expenses are not found to be significant as is expected. This casts serious doubt on the validity of tax-related benefits as a motive. The only significant variable from these regressions bearing on this hypothesis indicates firms with less information asymmetry experience stronger market reaction. Conversely, the significant Obtaining-Financing Hypothesis regression results indicate more positive market reaction for lessees having rated debt and a more favorable liquidity position. This evidence is consistent with more creditworthy lessees obtaining better terms on the financing obtained through the SLB.

Overall, the regression results for REIT lessors may be interpreted as showing they benefit from purchasing properties through SLBs[11] as there is a positive relationship between market reaction and the amount of the SLB. An agency-cost explanation is supported because firms subject to greater outside monitoring experience a less negative reaction. However, the apparently contradictory, insignificant event-study returns suggest that these benefits do not contain investment bonuses or penalties that are unavailable to the lessors through other types of real estate equity investments. This also supports the agency-cost hypothesis since it is consistent with REITs being required to commit their capital in a timely manner and suggests that SLBs are not significantly different from other REIT property investments. Taken altogether, these findings suggest that SLB transactions are effectively zero net present value projects.

Endnotes

[1] The nature of REIT operations and the regulations they must satisfy to remain qualified are detailed in the next section.

[2] This fact is verified by an examination of the 10-K forms of several qualified REITs. These reports clearly show the deduction of both types of expenses in the income statements.

[3] Chan, Erickson, and Wang (2003, Table 5.1) show that the average market capitalization of REITs in 2000 equals $725.7 million, compared to the average for all non-REIT firms on the NYSE ($4.674 billion), and the NASDAQ ($792.8 million).

[4] An interesting example cited in Pappas (1996:3) describes a SLB financing of a property under construction, which is handled through a ''split-funding'' arrangement involving three parties, but which reduces expenses in that there is only one closing and one set of documents, rather than three.

[5] Since the lessor firm is a REIT, the term *SALES* applies to items like rental and other investment income, variously described in a sample of REIT income statements as: lease payments, mortgage interest, real property income, management fees, and qualified property sale proceeds.

[6] The regression analysis is also conducted with an alternative tax rate variable calculated as tax liability divided by the sum of net income plus tax liability. The results are qualitatively similar.

[7] Given the significant evidence from Fisher (2004) cited above, the length of the lease (*MAT*) is also considered to be a desirable explanatory, control variable in the lessee regressions. However, the actual lease maturity is only available for 31 of the 54 usable lessee announcements. This reduction in the number of lessee observations in the regression models rendered the results (in comparison to those depicted in this study) insignificant based on the *F*-test statistics and causes the significant parameter estimates to become insignificant.

[8] The final number of lessor (lessee) announcements is reduced to 92 (54) due to either contaminating events during the five-day announcement period (two days before and after day 0), there are ten or more missing returns during the 270-day period of analysis or the firm is not listed.

[9] A dummy variable representing pre-1993 versus post-1993 announcements for both lessor and lessee tax benefits is employed in alternative regression analysis to test for an effect due to the regulatory lengthening of depreciation tax benefits. It proves to be insignificant in all (four) lessor regressions and is only marginally significant (at the 10% level) in one (of four) lessee regressions, possibly due to the small number (8 of 54) of lessee announcements occurring in 1993, or earlier.

[10] One of the referees pointed out that this ROE result also suggests the relationship between the creditworthiness variables employed may be more complicated than that postulated here. However, that question will be deferred to a future research project.

[11] The authors are indebted to one of this journal's referees for suggesting this conclusion.

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