

# **Do UPREITs Suffer Tax-Timing Conflict of Interest?**

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This research was supported by a research grant from the *Real Estate Research Institute*.

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**Abstract:** The major cause leading to management's breach of fiduciary duty is the misalignment of interest between management and shareholders. In the case of Umbrella Real Estate Investment Trusts (UPREITs), a frequently cited conflict of interest is tax timing. Tax timing conflict arises if management receives an attractive offer to sell some of the properties. Management, who usually has large built-in capital gains in the contributed real properties, may be reluctant to sell properties because of the negative personal tax implication that may result. In this research, we argue that this concern about tax timing conflict may be misplaced. Our empirical evidence indicates that property acquisition prices in a tax-deferred contribution is discounted, hence the agency problems are incorporated in the acquisition price.

## 1. Introduction

An UPREIT structure consists of two entities: a REIT and an operating partnership (OP) where the REIT typically serves as a general partner and conducts almost all of its business through the controlled operating partnership. The two-tiered structure of UPREITs has been adopted to take advantage of the tax deferred property transactions. While transferring real properties directly to a REIT is taxable, transferring properties to the partnership is not taxable if the consideration received is only partnership units (i.e., not cash or common stocks). This is true even if partnership units are exchangeable one-for-one into common stocks of the REIT<sup>1</sup> at the end of a lock-up period. For real estate that has been held for a long time while taking tax-deductible depreciation, the adjusted tax basis of the building can be low relative to its fair market value, and its built-in capital gains can be large. Consequently, sellers of property with large built-in capital gains will find it attractive if their properties can be sold on a tax deferred basis. On the other hand, a lower tax basis is detrimental to UPREIT shareholders' wealth because it lowers the depreciation deduction that they can enjoy.<sup>2</sup> After transferring properties to the OP in exchange for OP partnership units, sellers' tax liabilities can be deferred until the earlier of either 1) the date when the OP controlled by the REIT sells these contributed properties, or 2) the date when the original sellers convert their OP units into common stocks of UPREITs. Tax timing problem arises if management, who tends to be OP unit holders, has a strong incentive not to sell the

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<sup>1</sup> OP units represent ownership interest in the operating partnership where REIT is a general partner.

<sup>2</sup> Although REITs, as investment conduits, usually do not pay corporate-level income taxes, shareholders pay shareholder-level taxes such as dividend taxes and capital gain taxes. In an efficient market, shareholder-level taxes are capitalized into REIT share prices.

contributed properties when such transactions are otherwise financially advantageous for the UPREIT common shareholders.

In the current study, we argue that this frequently cited concern about the tax timing conflict of interest is overstated. We anticipate that the market addresses this conflict of interest by discounting the tax-deferred property acquisition prices. Using property level data, we offer evidence that the property acquisition prices in tax-deferred contributions are indeed discounted, hence the agency problems are incorporated in the acquisition price.

A related study by Sinai and Gyourko (2000) initially tried to determine if property acquisition prices paid by UPREITs were lower than those by regular REITs. Their effort however has not rendered adequate results due to a significant data measurement problem. Sinai and Gyourko (2000) then utilized share return data to infer the tax benefit to UPREITs, whereas in the current study we seek direct evidence of the tax impact on property prices.<sup>3</sup> A recent work by Gentry, Kemsley, and Mayer (2003a) examines how shareholder-level dividend taxes are incorporated into REIT share prices. Their research finds strong evidence that REIT shareholders value the tax deduction benefit of taking depreciation. Holding for the market value of properties constant, they find the REITs with higher tax basis, hence higher depreciation deduction, command higher stock market values. This result implies that stock market is efficient in incorporating tax benefits.

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<sup>3</sup> See Todd and Gyourko (2000) page 12 note 10 “In an earlier version of this paper, we tried examining the effect on acquisition prices [...] However, the point estimates were imprecisely measured and the implied capitalization into property prices was so large in some cases that we suspect the underlying data had too much noise to generate convincing results.”

Two other studies are also related to our tax capitalization argument. Holmes and Slade (2001) examine the impact of tax-deferred section 1031 exchange on apartment transaction prices. They find that, while sales price of relinquished properties are not significantly impacted, the purchase prices of replacement property in a section 1031 exchange hold price premiums. In a section 1031, since only the property is exchanged while the tax basis staying with original owner, they argue that the purchase price premium is consistent with the tax capitalization hypothesis where the section 1031 purchaser can afford to bid the property price up so that regular seller in a section 1031 exchange shares part of buyer's tax deferral benefit. Additionally, Campbell et al. (2001) examine the signaling role of the method of payment and its impacts on stock returns during REIT mergers and acquisitions. They find that the status of being an UPREIT seems to hold additional explanation power for the (positive) abnormal returns over that provided by the ratio of the value of partnership units used in acquisition or merger transaction. So they argue that the positive wealth effects of the UPREIT structure are not fully explained as the capitalization of tax benefits. But as we argue in this paper, the ratio of the value of partnership units is not a good indicator of the tax basis in the properties, so the additional explanation power of the UPREIT status in Campbell et al. (2001) might be picking up the remaining tax impact not captured by the ratio of the value of partnership units used in the transaction.

The next section of the paper examines the theoretical arguments and develops the main hypothesis of the current study. Section 3 presents the empirical methodology and section 4 discusses the data used in this study. The results are provided in section 5. Section 6 offers some concluding remarks.

## 2. Discussions and Hypothesis

The hypothesis that the benefit of the tax-deferred contribution of properties should be capitalized into transaction price is widely discussed in the both academic and professional literature, yet so far it has not been empirically tested. To develop a better understanding of the issue, we first gauge the potential benefit that a tax-deferred property contribution (to a partnership) may have on the reservation prices of both buyer and seller. Consider a commercial property sold for cash at  $MV$ , of which 100% is depreciable due to a ground lease. Suppose an investor expect to hold this property for its statutory depreciation period of 39-years and sell it for at least what she paid for it.<sup>4</sup> Let the investor's marginal income tax rate to be  $\tau$  and the capital gains tax rate applicable to depreciation recapture to be  $\tau_r$ .<sup>5,6</sup> The investor's net benefit, as of the time of purchase, from depreciation tax shield can be expressed as following:

$$\text{Buyer's Tax Benefit} = \sum_{n=1}^{39} \frac{(MV / 39) \cdot \tau}{(1 + r)^n} - \frac{MV \cdot \tau_r}{(1 + r)^{39}}, \quad (1)$$

where  $r$  is after-tax discount rate. However, if the same property with zero tax basis is purchased in a tax-deferred contribution to a partnership, the buyer will not be able to take tax-deductible depreciation until 5-12 years later when the lock-up agreement is expired. The buyer's net loss due to the delayed tax benefit ( $L_b$ ) is given by:

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<sup>4</sup> Apartment properties are depreciated on a schedule of 27.5 years, instead of 39.

<sup>5</sup> In 1997, capital gains tax rate was reduced from 28% to 20% as per the Taxpayer Relief Act, but the Act added a 25% depreciation recapture rate for real estate. In 2003, the capital gains tax rate was again reduced from 20% to 15% (the Job and Growth Tax Relief Reconciliation Act), but recapture tax rate remained at 25%.

<sup>6</sup> There may be other capital gains taxes that are not attributable to the depreciation tax shields. They are not relevant for computing the PV of the depreciation tax shields.

$$L_b = \left\{1 - \frac{1}{(1+r)^k}\right\} \cdot \text{Buyer's Tax Benefit}, \quad (2)$$

where  $k$  is the term of the lock-up agreement.

On the other hand, the seller's benefit from deferring the capital gains tax of the zero tax basis property is:

$$B_s = \left\{1 - \frac{1}{(1+r)^k}\right\} \cdot \{\tau_r \cdot P + \tau_g (MV - P)\} \quad (3)$$

where  $\tau_g$  is the capital gains tax rate and  $P$  is the seller's historical cost for the property.

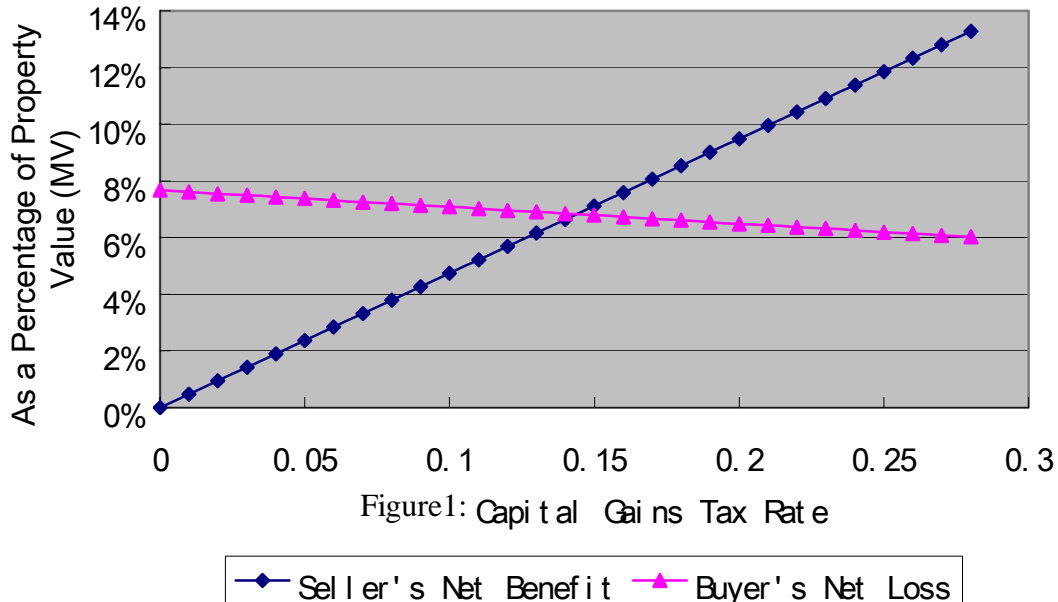
To simplify the analysis, we assume  $\tau_r = \tau_g$ , then Equation (3) becomes

$$B_s = \left\{1 - \frac{1}{(1+r)^k}\right\} \cdot \tau_g \cdot MV \quad (4)$$

It is interesting to point out that it is not always better to defer the capital gains tax. When the capital gains tax rate is lower relative to the individual's marginal income tax rate, it becomes attractive to realize the tax gains immediately so that the buyer can take depreciations at the higher individual marginal income tax rate. Additionally, when the interest rate is lower, deferring capital gains tax also becomes less attractive because the time value of deferring tax to a later date is getting smaller while saving from future depreciation tax shields is discounted at a lower rate.

To see that in an example, assume the property is 100% depreciable,  $\tau = 39.6\%$ ,  $r = 5.5\%$ , and  $k = 12$  years, and let  $\tau_r = \tau_g$  to vary from 0% to 28%. We can obtain how  $L_b/MV$  and  $D_s/MV$  change with respect to  $\tau_r = \tau_g$ . In Figure 1, we illustrate that when capital gains tax rate falls to 15%, it is no longer optimal to defer the capital gains tax through property contribution to a partnership. This is consistent with the observations

that the outstanding numbers of OP units in many UPREITs are dramatically reduced in recent years after capital gains tax rate is reduced from 28% to 20% and then to 15%.



Depending on the relative bargaining power of the buyer and seller, the transaction price in a tax-deferred property contribution will have a price discount that splits the total gain of  $(B_s - L_b)$  between the buyer and seller. In Figure 1, for  $\tau_r = \tau_g = 20\%$ ,  $B_s/MV=9.5\%$  and  $L_b/MV=6.5\%$ ; while for  $\tau_r = \tau_g = 28\%$ ,  $B_s/MV=13.3\%$  and  $L_b/MV=6.0\%$ . So it is reasonable to expect the price discount in a tax-deferred property contribution to be in the range of 6.5% to 13.3%. These numbers assume property is 100% depreciable. If land accounts for 25% of the property value, then observed price discount should be in the range of 4.9% to 10%. If the contributed property still has some depreciable tax basis instead of zero, we expected the observed price discount to be even lower than 4.9% to 10%.

To test the hypothesis, ideally we would like to observe the level of tax basis in a property. Since the lower tax basis results in a smaller tax-deductible depreciation for the buyer, we expect, holding all other factors constant, the acquisition price to be lower for properties with a lower tax basis. Our null hypothesis therefore is as following:

*H1: Holding all other factors constant, the property acquisition price is negatively associated with that property's tax basis.*

Unfortunately, as in many other tax studies, the tax basis of property is not directly observable from our data. As a first step of our effort, we need to develop a reasonable proxy for property's tax basis. One candidate proxy is the payment method of transaction (partnership units, cash, debt assumption, stocks, etc.). Since selling property for partnership units does not trigger capital gains tax while other forms of payment do, we expect properties with the tax basis below its market value to self-select into using partnership units as the payment method, while properties with the tax basis equal or above its market value to self-select into using other forms of payment method to realize the loss and to deduct taxable income. It shall be noted here that if the partnership units are used to pay for a portion of the consideration, it is possible that some portion of the capital gains may need to be recognized and the transaction becomes partially taxable. For example, when the contributing partner's net debt shifts to the partnership (through debt assumption by partnership) in a property contribution that is in excess of the contributed property's tax basis, the excess over the tax basis will be recognized as gains from the sale at the year of contribution, and thus is taxable. However, even in this case, any gains associated with the consideration paid in partnership units will still be tax-deferred and thus the property's tax basis will be lower

than its market value. So we believe that a dummy variable (*OP Dummy*) indicating whether partnership units are used can be a good proxy for the property's tax basis in relation to its market value. When partnership units are used to pay for the entire or part of the consideration, the property's tax basis is always lower than its full market value. So our testable null hypothesis is the following:

*H2: Holding all other factors constant, the property acquisition price is negatively associated with the use of partnership units as the payment method.*

A few considerations may complicate our analysis and deserve further discussion. First, the tax basis of the partnership immediately after receiving the contributed property increases by the contributed property's inherent tax basis at the time of contribution plus any gains realized in the transaction. In a completely tax-deferred transaction, since no gain is realized, the partnership's tax basis increases only by the property's inherent tax basis, which can be very low (relative to property's market price) depending on the length of time the property was held by the contributor. What complicates our analysis further is the government rule (Internal Revenue Code Sec. 704 ©) that requires, to the extent possible, the noncontributing partners be put in the same position they would have been in had the property had basis equal to value. Put differently, to the extent possible, the noncontributing partner must be allocated depreciation deductions based on the property's market value.<sup>7</sup> The important implication of this government rule is that

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<sup>7</sup> There are in general three depreciation allocation methods under Treasury Reg. Section 1.704-3: 1) the traditional method, 2) the remedial allocation method, 3) the traditional method with curative allocations. Among the three methods, the traditional method and curative allocation method are, respectively, the least

property price in an acquisition involving partnership units may be not discounted as much or at all, which would decrease the likelihood of obtaining our hypothesized price effect.

Second, property sellers may use other tax deferral strategies involving no partnership units, for example, installment sale (with or without wrap-around mortgage) and the section 1031 exchange, to achieve the tax deferral benefit. Installment sale permits a taxpayer to defer gains recognition until the taxpayer actually receives the installment payments, while section 1031 exchange allows property seller to defer gains as long as a qualified replacement property is purchased within a certain period. However unlike in the tax-deferred property contribution to partnership, buyer's tax basis in these strategies are not adversely impacted by seller's tax-deferral. To the contrary, buyers may even share some of seller's tax deferral benefits by driving up the selling price as demonstrated by Holmes and Slade (2001) in the case of Section 1031 exchange. Thus, the existence of the observations using these strategies may bias us towards finding the null hypothesis. However, in this study we take steps to exclude those alternative tax-deferred transactions by reading through the transaction documents. So the final sample is believed to be relatively clean of these alternative tax-deferred transactions.

Third, in addition to the first type of self-selection based on the property's tax basis relative to its market value, there exists another potential self-selection based on the over- or under-valuation of REIT common stocks relative to the underlying assets owned by the REIT-controlled partnership. Since each share of partnership units are exchangeable one-for-one to REIT common stock after a certain period, the overvalued

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and the most favorable depreciation method to the noncontributing partners. For more details, see Rubin and Whitewaay (2004) and Manolakas and Anderson (1990).

firms and their partnership subsidiaries will have incentives to use the overvalued partnership units as currency to pay for the acquisition. The seller is likely to recognize this and request more shares of partnership units. The final result will be a higher acquisition price if the consideration is paid in overvalued partnership units. This result will bias our analysis against finding support for our null hypothesis. In our analysis we address this problem by explicitly incorporating a variable that measures over and under valuation of partnership units, details of which we describe later in the paper.

Alternatively, one can use the ratio of the value of partnership units in a transaction to proxy for inherent tax basis of property at the time of transaction. One common tendency is to assume that the more partnership units are used in a property transaction the lower is the tax basis of the contributed property. Reality, however, is more convoluted. Here we use a very simplified example to bring out our point. The owner of an unencumbered building with zero tax basis but a market value of \$100 can cash out his investment by taking out \$99 of mortgage loan first and then sell the remaining equity in building for \$1 of partnership units. Provided some requirements are satisfied, in particular if his liability is not reduced by shifting the mortgage debt to the partnership,<sup>8</sup> the contributing partner can sell the property and defer all of the capital gains of \$100, while utilizing very little partnership units, only 1% of property's market value. There are also additional rules in practice of structuring tax-deferred property sales, so that the high usage of partnership units may be a very noisy indicator of the level of tax basis. Our conjecture is also confirmed by our conversations with the acquisition

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<sup>8</sup> "Pursuant to Code Sec. 752(b), any decrease in a partner's share of the liabilities of a partnership, or any decrease in a partner's individual liabilities by reason of the assumption by the partnership of such individual liabilities, is treated as a distribution of money to the partner by the partnership." See Rubin and Whiteway (2004), page 14.

professionals in a major office REIT. Consequently, we expect using the ratio of the value of partnership, instead of the dummy variable, to proxy for the unobserved tax basis may yield less robust results.

### 3. Empirical Methodology

To test the hypothesis that a tax-deferred property transaction influences the acquisition price, we must find an objective metric that captures the relevant information contained in price. Following finance literature in general, we conduct the analyses using *price multiple*, which we define as the ratio of the total acquisition price to the property's average rental income over the three years after the acquisition.<sup>9</sup>

We define total acquisition price as all the considerations paid for the property, including cash, partnership units, common stock, liabilities assumption, and other valuable considerations. If property acquisition is paid in cash, the acquisition price is relatively easy to determine. When it is paid by other means, it can be trickier. The following excerpt from 8-K report of EOP OPERATING LP, the operating partnership controlled by Equity office Inc., one of the largest REITs, filed on January 20, 1999 provides a good example:

On October 1, 1998, the Company acquired **Worldwide Plaza** from an unaffiliated party. The \$578.0 million purchase price specified in the purchase contract was adjusted to \$624.6 million for the following: (a) the assumption of a \$268.6 million mortgage with an estimated mark to market adjustment of \$11.2 million; (b) the assumption of a deferred real estate tax liability with a present value of approximately \$31.2 million; (c) the issuance of 6,861,166 Units with an estimated fair value of \$171.9

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<sup>9</sup> We use the average rental income over the three-year period following the acquisition to smooth possible fluctuations in the rental income. Some properties experienced a significant decrease in rental income in one of the years following the acquisition due to a major renovation. We were able to detect such renovation costs by examining the rental income over the years. We chose not to include the rental income in the year of renovation in our 3-year average rental calculations.

million based on a fair value of \$25.05 per Unit; (d) a cash payment of approximately \$110.1 million; (e) closing and transaction costs of approximately \$4.2 million; and (f) the issuance of a transferable put option on the Units exercisable only on the third anniversary of closing with an estimated fair value of \$27.4 million. This option entitles its holder to additional Common Shares, the number of which shall be determined using a formula based on the extent, if any, that the Common Shares are then trading at less than \$29.05 per share.

In this property acquisition, the true acquisition cost is \$624.6 million, instead of \$578 million. In the SNL REIT/REOC property list, the former number is reported as “initial cost”, while the latter one as “acquisition price”. Additionally, while “acquisition price” is frequently not disclosed, “initial cost” is consistently reported in Schedule III table of 10-K report for each property owned by a REIT. For this reason, in this study we use “initial cost” as our measure of true acquisition price.

Rental income is defined (in Equity office 10-K report) as the monthly contractual base rents as of the reporting date under existing leases multiplied by 12 months ("Annualized Rent") and expense reimbursements from tenants. The reporting standard for rental income may be different across different firms. In the later part of the paper we will revisit the issue to discuss how we control this heterogeneity problem.

We estimate the following multivariate equation:

$$\begin{aligned}
 Price\_Multiple = & \alpha_0 + \alpha_1 \cdot OP\_Dummy + \alpha_2 \cdot Age + \alpha_3 \cdot Effective\_Premium\_Hat \\
 & + \sum_{i=1}^6 \beta_i \cdot Property\_Type + \sum_{i=1}^5 \lambda_i \cdot Year + \varepsilon,
 \end{aligned} \tag{5}$$

where,

**Price\_Multiple** = **Initial\_Cost** divided by **Base\_Rents**.

**OP\_Dummy**=a binary variable equal to one if the transaction involves partnership units as consideration and zero otherwise.

**Effective\_Premium** = portion of the total acquisition price (in percentage) attributable to the premium or discount related to using over or undervalued equity securities such as common stocks and OP units. If a REIT acquires the property by 80% in cash and 20% in its common stocks, while its common stocks are 30% overvalued relative to its Green Street net asset value, then the effective premium is  $\frac{1}{0.8 + 0.2 * (1 - 0.3)} - 1 = 6.4\%$  . If

instead, in the above example, its stocks are 40% undervalued, then the effective premium is  $\frac{1}{0.8 + 0.2 / (1 - 0.4)} - 1 = -11.8\%$  .

**Effective\_Premium\_Hat** = instrumented measure of the *Effective\_Premium* variable since one determinant of the effective premium, the percentage of equity securities used in a transaction, is simultaneously determined with the dependent variable.

**Price\_Multiple.**

**Age** = Number of years from the time of property was built to the time the property is acquired.

**Property\_Type** = Types of Property including office, CBD office, suburban office, regional mall, shopping center, apartment, and manufactured home. Each property type is included in the structural model as a binary variable except the Office variable, which is suppressed.

**Year** = Time periods from 1994 to 1999. Each time period is included in the structured model as a binary variable except Year 1995, which is suppressed.

The coefficient on *OP\_Dummy* variable represents the mean difference in the price multiples between the tax deferred and taxable property transactions. A smaller price multiple implies a lower price relative to rents. Following our hypothesis that

property valuation is decreasing in the tax basis, we expect the coefficient on *OP\_Dummy* variable to be negative. Similarly, since older buildings are harder to maintain, we expect the coefficient on the *Age* variable to be negative as well.

When stocks or OP units sell for a premium (discount) relative to the underlying net asset value, the property acquisition price if paid using stocks or OP units may have a higher (lower) price multiple. *Effective\_Premium* is a measure of the price impact of over- or undervalued equity securities. In the current paper, net asset value (NAV) estimates are provided by Green Street Advisor, a buy-side research firm.<sup>10</sup> Green Street derives the net asset value by obtaining the fair market value of real estate holdings of a REIT. After adjusting for the value of other assets and liabilities, NAV can be compared to REIT share price to examine if the current share price is over or under-valued relative to its assets. In three recent studies, Clayton and MacKinnon (2001) and Gentry, Kemsley, and Mayer (2003b and 2003c) provide strong evidence that REIT stock prices tend to mean revert to Green Street net asset value. Consequently, incorporating the *Effective\_Premium* variable in the model shall allow us to isolate the potential effect caused by a temporarily stock price deviation from its fundamental value. In actual estimation of the model, however, note that we use the instrumented variable measure of *Effective\_Premium* instead. This is because one determinant of the *Effective\_Premium*, i.e., the percentage of equity securities used in a transaction, is simultaneously determined with the dependent variable. The instrumented variable *Effective\_Premium\_Hat* is computed using the predicted percentage of equity securities

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<sup>10</sup> According to Gentry, Kemsley, and Mayer (2003), “industry observers and participants almost uniformly agree that Green Street produces the most careful and accurate estimates in the REIT industry.”[...] “These analysts compute NAV by determining the fair market value of each property owned by REIT.”

from a regression of actual percentage of equity securities on various independent variables using Hackman's 2-step procedure.

Different property types may command different price multiples. We control this difference in price multiples by including the dummy variables: *Office*, *CBD\_Office*, *Suburban\_Office*, *Regional\_Mall*, *Shopping\_Center*, *Apartment*, and *Manufactured\_Home*. All these dummy variables equal to one if building is a specific property type and zero if otherwise. As usual, one property type has to be left out in the equation to avoid perfect collinearity. In this case we select dummy variable *Office*. Time variables are also incorporated into the model to capture any intertemporal price changes that have occurred during the period under investigation. *Yr94*, *Yr95*, *Yr96*, *Yr97*, *Yr98*, and *Yr99* are all dummy variables that take a value of one if the acquisition took effect in a specific year and zero otherwise.

#### **4. Data and Sample Selection**

The data used in this study are taken from three sources. SNL DataSource is our source of REIT financial information. More importantly, SNL DataSource provides a comprehensive REIT/REOC list of all current and past properties that were purchased, built, developed, or disposed by each REIT with property-level information such as purchase date, property size, built year, property type, initial cost (of property to company), base rents, historical cost, and location. This detailed large sample property level dataset allows us to control for property quality more effectively. It, however, should be noted that not all REITs report property-level rent information, and SNL

deletes a property from REIT/REOC property list if another REIT acquires the REIT owning the property.

The second data source for our study is Thomson Financial's *SDC Platinum* Merger & Acquisitions data set from Security Data Corporation. This particular SDC data is unique in that it provides the purchase term information that SNL DataSource lacks. We need it to determine the payment method of property acquisition such as OP units, common stock, cash, and debt assumption.

The third data source for our study is the historical net asset value (NAV) Premium / Discount database by Green Street Advisor, which provides monthly premium/discount data of REIT stock price relative to the underlying REIT assets. We obtained this data directly from Green Street Advisor.

We select our sample time period based on the following factors. First, Green Street began providing monthly NAV premium/discount data in year 1994. In addition, the first UPREIT structure did not come to existence until November 1992 (Taubman Center, Inc.). Second, since we measure the acquisition price as a multiple of the average property rents during the 3 years after the acquisition, we must provide enough time to compute average rental income. Based on these considerations, we define our sample period as January 1, 1994 through December 31, 2001.

We construct a unique database using these three data sources. To obtain data on the payment method of property acquisitions, we search the *SDC Platinum* database to locate the property acquisitions in which REITs acquired 100% interest with its deal status as "completed" and the acquisition forms as either "Acquisition of Assets" or "Acquisition of Certain Assets." Our initial sample consisted of 1587 acquisitions.

We then matched this sample of data to Green Street historical NAV Premium/discount data by acquirer's CUSIP number, and year and month of the transactions, and retain only those observations that have been matched with Green Street NAV premium/discount data. With this information, we are able to better control the effect of stock price deviations from its fundamental value on acquirer's incentive to use partnership units and common stocks as acquisition currency and on acquisition price. This reduces our sample to 453 observations. The surviving sample from the previous steps is then hand matched with SNL REIT/REOC Property lists using information disclosed in deal synopsis on acquirer name, property name, property location, property type, size, deal time. We only retain an observation in the sample if rent and initial cost information of a property are found. Since many REITs do not report property-level rent information, and the information on properties owned by REITs that were subsequently acquired by another REIT are not provided in SNL REIT/REOC Property list, our sample is reduced to 126 properties.

The remaining sample is further pruned by restricting the sample to include only the more standardized property types such as office, retail, apartment, and manufactured home while excluding land, hotel, industrial, storage, and health care type of property acquisitions. Observations with more than a 3% change in reported property size during the 3 years after the acquisition (as measured by square feet or number of rooms), and acquisitions involving ground lease, in-construction projects, section 1031 exchange, and installment sales are also deleted. The final sample consists of 83 property acquisitions from 5 REITs. The tickers of these 5 REITs are CLP, CPJ, EOP, MHC, and PP.

**Table 1.** Descriptive statistics of the data sample, January 1, 1994-December 31, 2001.

Variable	N	Mean	St. Dev	Minimum	Maximum
<i>Price Multiple</i>	83	7.54	1.43	4.47	10.96
<i>Initial_Cost (000)</i>	83	50,398.37	97,039.42	1,316.00	62,4595.00
<i>Base_Rents (000)</i>	83	6,429.90	11,708.37	189.96	73,605.00
<i>OP Percent</i>	83	0.10	0.11	0	0.40
<i>Age (Year)</i>	71	13.66	12.57	0	92
<i>Square Feet (Million sq<sup>2</sup>)</i>	69	0.38	0.38	0.028	2.00
<i>Number of Apt Units</i>	12	244.92	100.32	104.00	392.00
<i>Green Street Premium</i>	83	0.19	0.20	-0.15	0.54
<i>Debt Ratio</i>	74	0.38	0.08	0.23	0.52
<i>New Cost After Acquisition</i>	83	0.02	0.03	0.00	0.15
<i>Historic Cost (000)</i>	83	51,000.88	97,465.22	1,315.00	62,4704.00

#### Frequency of Dichotomous Variables

Variable	Mean	Observations
<i>OP_Dummy</i>	0.61	51
<i>Built Year Missing</i>	0.17	12
<i>Portfolio Dummy</i>	0.52	43
<i>CBD Office Building</i>	0.17	14
<i>Office</i>	0.25	21
<i>Suburban Office Building</i>	0.05	4
<i>Regional Mall</i>	0.06	5
<i>Shopping Center</i>	0.16	13
<i>Apartments</i>	0.14	12
<i>Manufactured Home</i>	0.17	14
<i>Yr94</i>	0.13	11
<i>Yr95</i>	0.02	2
<i>Yr96</i>	0.12	10
<i>Yr97</i>	0.51	42
<i>Yr98</i>	0.17	14
<i>Yr99</i>	0.05	4
<i>CLP</i>	0.36	30
<i>CPJ</i>	0.11	9
<i>EOP</i>	0.42	35
<i>MHC</i>	0.06	5
<i>PP</i>	0.05	4

#### Number of Properties by Ticker and Property Types

	CLP	CPJ	EOP	MHC	PP
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<i>Office</i>		14	
<i>CBD Office</i>		22	
<i>Suburban Office</i>			5
<i>Regional Mall</i>	5		
<i>Shopping Center</i>	14		
<i>Apartment</i>	12		
<i>Manufactured Home</i>		11	6

## 5. Empirical Results

The objective of our model is to determine if price multiple discounts occur in transactions that involved a tax-deferred contribution of property. Table 2 shows various weighted least square regression results for reduced and full model described in Equation (5). The coefficient for the property type variables CBD Office, Regional Mall and Shopping Center are consistently positive and significant across different models at mostly 1% level. The coefficient on CBD Office suggests that for each dollar of annual rental income, CBD offices command a premium in price of 1.2 dollars over that of a regular office. This is as expected since CBD offices, due to their excellent locations, may have more stable future incomes and are better able to weather the economic downturn than a regular office. Similarly, the coefficients on Regional Mall and Shopping Center also suggest that these property types command a price premium over regular office. On the other hand, the coefficients on Suburban Office Building, Apartment, Manufactured Home, and the time variables in the model are mostly insignificant. However, we need to point out that the base rents we used in calculating price multiples do not control for the types of lease involved. Some office leases may be triple net leases while the others may be the gross leases. Additionally retail leases frequently have overage rents (percentage rents) in addition to the contracted base rents.

Not controlling for this difference in leases may cause estimation bias and the reader is cautioned to consider this caveat when interpreting the property type coefficients.

The variable of primary interest is the OP Dummy variable. In Model (1), as expected, the coefficient on the OP Dummy variable is both negative and significant at the 0.05 level after controlling for property types and time period. In Model (2), we expand the control variable to include the building age. Again we find the coefficient on the OP Dummy variable to be negative and significant at the 0.10 level. In addition, the coefficient on the Age variable is negative though not significant. This is reasonable and expected because the older buildings are more costly to operate. Additionally, older building may have lower tax basis, so the Age variable may also capture part of the tax basis effect that is supposed to be captured by the OP Dummy variable. This could explain why the significance level of the coefficient on the OP Dummy variable is lower when the Age variable is included.

In Model (3), we include the Effective Premium Hat variable to account for influence on price multiple of the over- or under-valuation of partnership units and common stocks. Although the coefficient on the Effective Premium Hat is not significant, its positive sign is as expected.<sup>11</sup> After including this additional control variable, the significance of the coefficient on the OP Dummy variable further declines to 0.176. The sign of the coefficient remains negative and its magnitude is close to the estimates in Models (1) and (2). Thus, we find evidence that the acquisition price is discounted in tax-deferred property contributions to the partnership.

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<sup>11</sup> Although the coefficient is insignificant, it is worth noting that the coefficient on the Effective Premium Hat variable is very close in magnitude to that of the intercept. This implies that, *ceteris paribus*, for each 1% inflation in the price of stock or OP units, the price multiple will also be adjusted up approximately 1% so that the buyer's benefit in using overvalued securities are mostly offset.

The economic rationality of the estimated coefficients for the OP Dummy variable can be formally assessed using results in the earlier part of paper. Averaging the coefficients of OP Dummy variable in Models (1), (2) and (3), we have a price multiple discount of approximately  $-0.75$ . Using the average price multiple of 7.54 in Table 1, we have a mean price multiple discount of  $0.75/7.54=10\%$ , which is on the upper bound of 4.9% to 10% price discount range we derived in Section 3 of this paper. This suggests that most of the benefits of a tax-deferred transaction are obtained by the UPREIT. This conclusion is the same as in Sinai and Gyourko (2000) where, by examining stock price movement around the tax rate changes in 1997, they claim “the benefit of the seller’s capital gains tax deferral accrued mainly to the buyer of an appreciated property.”

Although results are not provided here, we also run similar regression using OP Percent, instead of OP Dummy, the results are qualitatively similar yet less statistically significant.

**Table 2.** Weight Least Square Regression Results (weighted by square feet)

Explanatory Variables	Model 1	Model 2	Model 3
<i>Intercept</i>	6.70***(2.92)	6.82***(2.70)	6.72*** (2.57)
<i>OP Dummy</i>	-0.85**(-2.11)	-0.78*(-1.75)	-0.61# (-1.35)
<i>Age</i>		-0.02(-0.60)	-0.02 (-0.65)
<i>Effective Premium Hat (instrumental variable)</i>			6.91 (0.61)
<i>CBD Office Building</i>	1.20***(2.76)	1.37***(2.85)	1.06** (2.03)
<i>Suburban Office Building</i>	-0.30(-0.44)	-0.35(-0.48)	-0.38 (-0.42)
<i>Regional Mall</i>	1.71***(3.87)	2.02***(3.42)	2.32*** (2.82)
<i>Shopping Center</i>	1.70***(2.63)	1.76***(2.90)	1.88***(2.23)
<i>Apartments</i>	0.33(0.41)	0.21(0.21)	0.56(0.47)
<i>Manufactured Home</i>	1.01***(2.75)	0.92(1.42)	1.59(1.55)
<i>Yr94</i>	0.49(0.21)	0.40(0.16)	1.17(0.46)
<i>Yr96</i>	0.45(0.19)	0.54(0.22)	0.28(0.11)

<i>Yr97</i>	0.65(0.28)	0.67(0.27)	0.13(0.05)
<i>Yr98</i>	-0.18(-0.07)	0.13(0.05)	0.23(0.09)
<i>Yr99</i>	1.51(0.64)	1.60(0.63)	1.53 (0.57)
Total <i>R</i> -square	0.32	0.35	0.37

Dependent variable is Price Multiple defined as the ratio of acquisition price as a multiple of annual rents. The suppressed dummy variables include Office and Yr95. The absolute values of the *t*-statistics are presented in parentheses.

\*\*\* Significant at the 0.01 level.

\*\* Significant at the 0.05 level.

\* Significant at the 0.10 level.

#: Significant at the 0.176 level.

## 6. Summary

Previous studies in the REITs literature suggests that tax-timing conflict of interest inherent in a UPREIT structure may hurt the REIT shareholders because the managers may be unwilling to dispose a property in fear of triggering large capital gains tax for themselves. However, one would expect that shareholders would realize that ex ante and require to be compensated in the form of lower acquisition prices by the REIT. The research in this paper supports this conjecture by providing empirical evidence that REITs pay a lower acquisition price for properties that have lower tax basis. Moreover, we show that the REIT shareholders may have been more than compensated for their loss because there is evidence that the benefit of the seller's capital gains tax deferral is mostly passed on to the buyer of the property.

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