

**TAXES, INVESTORS, AND MANAGERS:
EXPLORING THE TAXATION OF FOREIGN INVESTORS IN U.S. REITS**

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ABSTRACT

Exploiting a 2004 reduction in a unique capital gains withholding tax for foreign investors in U.S. publicly-traded REITs, this paper explores both the sensitivity of real estate investors to changes in their own taxes and the reaction of real estate managers to changes in their investors' taxes. We find that both foreign investors and REIT managers responded to the tax change. This is consistent with taxes both restricting the flow of foreign capital into U.S. REITs and affecting the management of their real estate properties. To our knowledge, this is the first paper documenting that U.S. managers change their U.S. operations in response to the tax positions of foreign investors. This work should spur further study of the interplay between real estate and income taxes, the role of taxes on foreign portfolio investment, and the role of taxes on real managerial decisions. It should also be informative to policy makers who recently relaxed the discriminatory tax treatment for foreign investors in U.S. real estate after considering the issue for many years.

Keywords: capital gains, foreign investors, REIT managers, withholding taxes, FIRPTA, real estate

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I. INTRODUCTION

This paper analyzes the impact of a unique tax on foreign investors in U.S. real estate investment trusts (REITs). REIT profits are generally exempt from entity-level U.S. taxes to the extent they are distributed to shareholders. Each form of profit retains its character (e.g., ordinary income from rental income, capital gain from sale of properties) and is taxed on the investor's tax return based on the type of distribution. Consequently, the portion of U.S. REIT capital gains attributable to foreign investors normally would escape U.S. taxation because foreigners are generally not required to file U.S. tax returns or pay tax on capital gains. However, since 1980, special taxes arising from the Foreign Investment in Real Property Tax Act of 1980 (FIRPTA) have applied to foreign investment in REITs that generate capital gains.

We analyze one type of REIT profit, capital gains from the sale of real estate, which is subject to unusually harsh FIRPTA taxes. From 1980 to 2004, the U.S. levied a 35 percent tax (enforced through withholding beginning in 1982) on all REIT capital gains distributions to all foreign investors. Since then, if certain conditions are met, the U.S. taxes a foreigner investor's portion of capital gains at the investor's country's dividend withholding tax rate per its tax treaty with the U.S. This rate varies by country, ranging up to 30 percent. For example, in 2005, the REIT capital gains withholding tax rate dropped from 35 percent to 30 percent for Canadian investors, to 15 percent for British investors, and to 10 percent for Japanese investors.¹

¹ All countries' rates dropped in 2005, but some countries' rates have been lowered even further in subsequent years. For example, Canadian investors' rate dropped again in 2009 to 15 percent. Our data is focused on investment bank and brokerage investors. Therefore, throughout the paper, unless otherwise specified, we are referring to rates for non-individual, non-pension investors. Rates may vary for other types of investors.

We exploit the identification provided by the 2005 change in the U.S. withholding tax on publicly-traded REIT capital gains to test the responsiveness of both foreign investors and REIT managers to changes in REIT distribution tax rates. We predict that the largest increases in foreign investment in U.S. REITs in 2005 were from countries where the withholding tax rate fell the most (e.g., greater increases in investment from Japan, where rates fell to 10 percent, than from Canada, where rates only declined to 30 percent).

We also test whether the foreign investor capital gains tax had created any type of “lock-in effect” on capital gains realizations. Managers of private non-listed REITs are reportedly extremely sensitive to FIRPTA taxes and have developed elaborate tax structures to shield foreign investors, including not selling real estate while foreign investors are shareholders (Grumbacher, Towsner, Schneider, and Norman 2013). If publicly-traded REIT managers are similarly sensitive to the effect of U.S. taxes on their foreign investors, then REITs with disproportionate investments from countries that enjoyed larger withholding tax rate reductions should have realized larger increases in capital gains after 2004 than did REITs whose investors were less affected by the tax cuts. In other words, the exogeneity of the rate reduction enables us to test whether REIT managers considered the reduction in their foreign investors’ U.S. withholding taxes when they rebalanced their real estate holdings.

To our knowledge, no one has addressed the responsiveness of foreign investors or managers to REIT tax changes.² In fact, few studies have studied whether foreign investors of any type respond to domestic taxes. One exception is Amiram and Frank (2015) who report that

² There is a substantial and growing literature on REITs, although very little that is relevant to our current study related to investor taxes or managerial decisions. Recent additions to the REIT literature include Li and Weber (2009); Mori, Ooi, and Wong (2014); Hartzell, Sun, and Titman (2006); Mühlhofer (2013) which investigate the taxation of different types of REIT distributions, REIT financing decisions, REIT corporate governance, and REIT sales regulations, respectively.

relatively favorable tax policies on the dividend income earned by foreign investors are associated with larger amounts of foreign portfolio investment. Another is Edwards and Shevlin (2011) who examine how a change in Canadian tax law affected the value of publicly traded income trusts to nonresident investors. We are also unaware of any research documenting that domestic managers alter their operations in response to the changing tax incentives of foreign investors. Several papers (e.g., Blouin, Raedy, and Shackelford 2011, Campbell, Chyz, Dhaliwal, and Schwartz 2013, Hanlon and Hoopes 2014, and Lin and Flannery 2013) have examined how shareholder taxes affect firm payout, capital expenditure, and leverage decisions.³ For example, Blouin et al. (2011) report that managers adjusted their mix of dividends and share repurchases after dividend and capital gains tax rates were changed in 2003 for U.S. individual investors, although changes were concentrated in those companies where insiders held disproportionate interests. However, they are examining domestic investors and we are investigating foreign ones. Also, they are exploring payout policies, as opposed to “real” operating decisions, such as the sale of apartments, office buildings and other properties. The fact that REIT distributions retain their character upon distribution means that we can identify changes in a REIT’s real estate sale activity by tracking shareholder capital gains distributions. The empirical setting in this paper offers a rare peek into firms’ actual operations since tax policy links REIT operational decisions to payout decisions. Thus, to our knowledge, this is the first study of whether there is a connection between real choices that managers make and foreign tax clienteles.

³ In addition, Campbell et al. (2013) examine how management decisions vary based on level of foreign ownership. However, in that paper they use foreign owners as a control group since in their setting foreign investors did not experience a change in tax rate. In contrast, we focus on foreign investors that did experience a tax rate change.

In our empirical tests, we estimate the amount of investment in each publicly-traded U.S. REIT from non-pension asset managers (e.g. investment advisors, brokers, and mutual fund managers) in 17 major foreign countries in both 2004 and 2005. For example, we find that asset managers in Japan held 2.88 percent of Ventas shares at the end of 2004. Any capital gain distributions for these Japanese investors in 2004 would have been subject to a 35 percent withholding tax and a requirement to file a U.S. tax return. However, in 2005 (after the change in the tax law), any capital gains for these Japanese investors would have been subject to only a 10 percent withholding rate. A reduction in the withholding rate from 35 percent to 10 percent for Japanese investors increased the likelihood that Japanese investors would be attracted to Ventas and other U.S. REITs. If managers of Ventas (and other American REITs held by foreigners who were now taxed more favorably) are influenced by the tax status of their investors, then we also expect that managers were less disinclined to sell appreciated properties in 2005 than they had been in earlier years.

To test for the sensitivity of foreign investors to changes in the withholding rates applied to REIT capital gains, we compare the change in aggregate investment from 2004 to 2005 from a particular country to a specific U.S. REIT with the reduction in the U.S. withholding tax rate levied on capital gains that those foreign investors might enjoy. We examine changes in 430 flows from countries to specific U.S. REITs. As predicted, we find that investments increased more from 2004 to 2005 from those countries where the withholding rate fell the most. Since investments surged when the withholding rate was reduced, we infer that the special U.S. withholdings on REIT capital gains constrain foreign investment in U.S. REITs. The details of these tests are discussed in the “Results” section; our results suggest an interquartile reduction in

the tax rate (i.e., from 30 percent to 15 percent) boosted foreign investment from \$2 million to \$3.5 million.

Next, we test for the responsiveness of REIT managers to changes in the withholding rates to see whether the foreign investor capital gains tax created any type of lock-in effect on capital gains realizations. We first compare the change from 2004 to 2005 in each REIT's aggregate capital gains distributions with the withholding tax rate reduction for that REIT's foreign investors, but we do not find any statistically significant results. We then expand our sample to include through 2009 to increase power. (Recall that a few tax treaties are renegotiated every year, resulting in possible additional changes to the applicable tax rates.) We find that capital gains distributions at the REIT level moved inversely with changes in withholding tax rates from 2005 to 2009. In other words, as expected, REITs whose foreign investors were disproportionately in countries where withholding rates fell substantially realized more capital gains than other REITs did, *ceteris paribus*. The findings are consistent with managers of U.S. REITs considering their foreign investors' U.S. tax liabilities when deciding to sell properties. In short, the evidence suggests that investor level taxes impose a lock-in effect on pass-through entity activities.

This paper makes three major contributions. First, it expands our scholarly understanding of how taxes affect foreign portfolio investment and the extent to which managers consider those taxes in making operational decisions. Second, it is one of the first papers to explore the impact of taxes on foreign investment in U.S. commercial real estate, a largely unexplored topic. Third, it should inform Congressional activity related to FIRPTA withholding taxes levied on foreign investments in real estate. Advocates contend that U.S. tax policy discourages foreign

investment in U.S. real estate.⁴ The evidence in this paper is consistent with the 2005 FIRPTA rate reduction on inbound portfolio investment increasing foreign investment in U.S. REITs.⁵ Our second finding adds that the 2005 changes impacted U.S. REIT capital gains realizations. This indicates that U.S. tax policy needs to consider not only the effect of rate reductions on foreign capital but also on domestic managers' portfolio decisions.

That said, our finding that FIRPTA constrains foreign investments in publicly-traded U.S. REITs does not necessarily mean that the overall foreign holdings in all U.S. commercial real estate increased after 2004 or would increase further if tax relief were expanded. Foreigners may have simply shifted some of their U.S. real estate holdings from organizational forms or tax structures that avoided FIRPTA treatment before 2005 to direct ownership in REITs in 2005 and after. If so, the net effect of tax relief on the U.S. commercial real estate market could have been marginal. In other words, the findings in the paper are consistent with FIRPTA withholding taxes dampening foreign investment in publicly-traded U.S. REITs; however, it is beyond the scope of this paper to quantify the change in total inbound foreign investment in U.S. real estate following the 2004 legislation.

The remainder of the paper is organized as follows: Section 2 provides background. Section 3 develops the testable hypothesis. Section 4 details the empirical design. Section 5 presents the findings. Section 6 describes robustness tests. Closing remarks follow.

⁴ "Protecting Americans from Tax Hikes Act of 2015" (PATH), which was signed by President Obama on December 18, 2015, modified FIRPTA. See a technical explanation of the provisions of PATH related to REITs and FIRPTA at <https://www.jct.gov/publications.html?func=startdown&id=4861>.

⁵ Our intention is to investigate the claim that FIRPTA suppresses foreign investment in U.S. REITs. It is beyond the scope of this paper to determine whether an increase of foreign investment in U.S. REITs is considered a desirable outcome.

II. REIT AND FIRPTA BACKGROUND

REITs are legal entities (corporation, trust, or association) that invest in real estate.⁶ The investments may be equity (ownership and operation) or debt (direct lending or investment in mortgage backed securities). As with mutual funds, investors buy shares in REITs, which can be publicly-traded or privately-traded. By pooling the investors' capital and investing in real estate assets, REITs enable individuals and entities to invest in liquid, diversified, professionally managed, income-producing real estate.

REITs are generally not subject to corporate-level U.S. taxes on income distributed to shareholders (and thus avoid double taxation), if they meet certain conditions.⁷ The single-tax result arises because REITs can deduct ordinary dividend and capital gains distributions paid to shareholders from taxable income, leaving the sole taxation at the shareholder-level. This paper focuses specifically on capital gains distributions for publicly-traded REITs because the 2004 law change only affected them. Capital gains distributions arise when REITs sell appreciated property. For U.S. investors, capital gains distributions from U.S. REITs are taxed at their personal capital gains tax rate (capped at 15 percent for individuals in 2004).

Despite the tax benefits of REITs, foreign investors in U.S. real estate, including REITs, are tax-disadvantaged. Generally speaking, foreign investors are not taxed on capital gains from the sale of U.S. assets. Concerns in the 1970s about foreign purchases of prime U.S. real estate

⁶ REITs are a major source of capital for the U.S. commercial real estate market and a popular means for foreigners to invest in U.S. real estate. According to the National Association of Real Estate Investment Trusts, at the end of May 2016, there were 220 REITs in the FTSE NAREIT All REITs Index, 190 of which were traded on the New York Stock Exchange with an equity market capitalization of \$1.023 trillion (NAREIT 2016).

⁷ To qualify as a REIT, a company must meet ownership, income, asset, and distribution tests. Details of these requirements can be found in Internal Revenue Code Sections 856-860. Most importantly for our purposes, a REIT must distribute at least 90 percent of its annual ordinary taxable income to shareholders; else the REIT must pay tax on its income, i.e., double taxation is restored. Consequently, external capital is needed to fund a REIT's growth. As discussed in Boudry (2011), given that any retained net capital gains would be taxed at a REIT's higher corporate rate rather than at investors' lower rates, it is reasonable to presume that REITs are distributing all of their capital gains even though they are not required to.

led Congress to enact FIRPTA, imposing a special withholding tax on foreign investors selling U.S. real estate. Specifically, a foreign investor is subject to U.S. income tax on income from disposition of U.S. real estate property interests (USRPI). USRPI includes both a direct investment in real estate and an indirect investment through the stock of a U.S. real property holding corporation (i.e., a USRPHC, a corporation whose assets are primarily composed of USRPIs). A foreign investor who sells stock of a U.S. REIT is considered selling stock of a USRPHC and is therefore subject to FIRPTA. In addition, FIRPTA applies if a foreign investor receives a capital gains dividend distribution from a U.S. REIT, as a result of its selling real property. The FIRPTA withholdings ensure that taxes are paid by foreigner investors. REITs making distributions to a foreign investor must collect the withholding tax and remit it to the U.S. (or be liable for the amount owed). FIRPTA takes precedence over existing tax treaties that might otherwise provide tax relief.

REIT distributions are commonly made-up of three distinct cash flows that all have different tax implications: ordinary income, return of capital, and capital gains.⁸ We need to look at the FIRPTA tax implications for all sources of U.S. REIT cash flows to foreign investors to fully understand the impact of FIRPTA. See Table 1 for a summary of the tax rules governing U.S. REIT investments.

Insert Table 1

Ordinary income distributions from rental income are not treated as real estate under FIRPTA, and therefore foreign shareholders are taxed at the 30 percent withholding rate for

⁸ Publicly traded REITs distributed \$29 billion to investors in 2013. Although the distribution mix varied by REIT, on average investors received 68 percent as ordinary dividend income, 19 percent as capital gains, and 13 percent as nontaxable return of capital. (www.reit.com.)

dividends, or lower depending on tax treaties.⁹ Under most tax treaties, a foreign investor is taxed at a rate of 0 – 30 percent if the foreign investor owns less than a certain percent of the shares of stock in a company. The average tax treaty rate is 15 percent, although many foreign pension plans are exempt altogether from any tax on ordinary income.¹⁰

When REITs sell appreciated property (creating capital gain distributions), U.S. investors are taxed at their personal capital gains tax rate, capped at 15 percent during 2004. In contrast, capital gains dividend distributions from sale of U.S. REIT assets are treated as real estate under FIRPTA, and therefore foreign investors are subject to a 35 percent withholding tax rate. Additional complexities arise from this type of income. Specifically, capital gains are also treated as income that is “effectively connected with” the conduct of a U.S. trade or business (Effectively Connected Income, ECI). Foreign investors that receive ECI have an obligation to file a U.S. federal tax return and become subject to the subpoena powers of the U.S. Internal Revenue Service (IRS) with respect to all of its US investments. Foreign investors reportedly go to great lengths to avoid the requirement of filing a U.S. tax return.¹¹

In 2004, Congress carved out an exception to the FIRPTA treatment of capital gains dividend distributions as part of the American Jobs Creation Act of 2004 (AJCA).¹² This

⁹ Before 1997, most U.S. tax treaties excluded ordinary income distributions from a REIT from the lower treaty rate on dividends but, rather, were subject to the full 30 percent withholding rate. In 1997, the U.S. changed its treaty policy with respect to REIT dividends (NAREIT 1997).

¹⁰ For example, with the U.S./German income tax treaty, the 30 percent withholding is reduced to 15 percent if a foreign non-individual entity investor owns less than 10 percent of the REIT; with the U.S./Netherlands income tax treaty, the 30 percent withholding is reduced to 15 percent if paid to a Dutch “beleggingsinstelling” or to an individual owning under 25 percent of REIT; Dutch pension funds are completely exempt.

¹¹ Additionally, if a foreign investor is a corporation and receives ECI, a second entity level tax applies to distributions by the corporation called “branch profits” tax. This is levied at 30 percent rate on the after-tax proceeds of an ECI investment, and is intended to mirror the tax that US taxpayers pay on dividends received from U.S. corporations. Consequently, a U.S. REIT capital gain distribution to a foreign investor can carry an effective tax rate as high as 54.5 percent (35 percent capital gains tax plus 30 percent branch profits tax on 65 percent after-tax proceeds (30 percent of remaining 65 percent is 19.5 percent)).

¹² The proposed law was introduced in the House as H.R. 4520 on June 4, 2004, but at that point did not contain any FIRPTA revisions. That bill passes the House on June 17, 2004. An amended bill that included the FIRPTA revisions passed in the Senate on July 15, 2004. Due to differences in the two passed bills, it was sent to conference

legislation was in response to assertions that FIRPTA taxes were depressing the value of U.S. commercial real estate by constraining the supply of foreign capital in U.S. REITs.¹³ The AJCA provides that a REIT capital gain dividend distribution is treated as ordinary dividend income if (1) the REIT is traded on an established securities market in the U.S., and (2) the foreign shareholder owns 5 percent or less of the REIT (at all times during the previous year).¹⁴ Consequently, beginning in 2005 foreign shareholders faced a rate that varied from zero to 30 percent if and only if the REIT was publicly-traded and the foreign investor owned no more than 5 percent of the REIT. In 2010, the U.S. House of Representatives passed legislation that would have raised the ownership cap from 5 percent to 10 percent, but the bill died in the U.S. Senate.¹⁵ Similar bills were introduced in 2011 and 2013. In December 2015, a law passed increasing the cap and making other changes related to the FIRPTA treatment of foreign investors in US REITs.¹⁶ One of the possible contributions of this paper is to provide some insights into the

committee. Conference report H. Rept. 108-755 was filed on October 7, 2004 and included the Senate's FIRPTA revisions. It was agreed to by the House on October 7, 2004 and the Senate on October 11, 2004. The bill became Public Law 108-357 on October 22, 2004. The FIRPTA change applied with respect to REIT taxable years after December 31, 2004.

¹³ For instance, see Senate discussion from August 1, 2003, asserting that foreign investors steered away from buying REITs because of FIRPTA taxes. 149 Cong. Rec. S10918 (2003).

¹⁴ The FIRPTA revision basically removed capital gains distributions from treatment as Effectively Connected Income for a foreign investor provided the two requirements are met. This means that a foreign investor is not required to file a U.S. federal income tax return by reason of receiving such a distribution, and the branch profits tax no longer applies to the distribution.

¹⁵ The U.S. House of Representatives passed the Real Estate Jobs and Investment Act of 2010 on July 29, 2010, by a 406-11 vote. On December 1, 2010, fourteen Senate Finance Committee members from both parties asked Committee leadership to consider FIRPTA reforms "as soon as possible" (Sen. Letter 2010). They asserted that foreign capital was needed to help the U.S. commercial real estate industry solve its equity problem, which would restart credit markets and create jobs.

¹⁶ The House introduced the Real Estate Jobs and Investment Act of 2011, H.R. 2989, (REJIA2011) on September 21, 2011. The Senate introduced the Real Estate Investment and Jobs Act of 2011, S. 1616, (REJIA2011) on September 21, 2011. The House introduced the Real Estate Investment and Jobs Act of 2013, H.R. 280 on June 6, 2013, and the Senate introduced the Real Estate Investment and Jobs Act of 2013, S. 1181 on July 31, 2013 (REJIA 2013). The 114th Congress did reform FIRPTA. On February 12, 2015, the Senate Finance Committee unanimously approved the Real Estate Investment and Jobs Act of 2015, S. 915; it was sent to the Senate as a whole for consideration on April 14, 2015. The House again introduced a similar bill, H.R. 2128: Real Estate Investment and Jobs Act of 2015 that was assigned to a congressional committee on April 30, 2015. These proposals culminated in a tax amendment to H.R. 2029, a defense department appropriations bill; which was passed by the House and Senate in December 2015, and became law on December 18, 2015.

responsiveness of investors and managers to the adoption of the 5 percent exemption and thus shed some light on the likely impact of expanding to 10 percent.

REITs may also have cash to make distributions greater than their taxable income, since real estate depreciation is a significant non-cash expense taken into account when calculating income. This type of distribution is deemed a return of a shareholder's original investment, and referred to as a return of capital. For U.S. shareholders, it is not taxed as ordinary income, but reduces the tax basis of shares by the amount distributed. In general, FIRPTA views income received from the return of capital similarly to the sale of REIT stock, which is discussed below.

Foreign shareholders in U.S. REITs can also profit from selling their shares. In general, foreign shareholders that sell U.S. REIT stock are subject to a 10 percent withholding on any gain. This contrasts with the sale of other U.S. securities, where foreign shareholders are not taxed. There are two exceptions to FIRPTA that can exempt foreign shareholders from any tax on a sale. First, gain from the sale of a U.S. REIT by a foreign shareholder is not subject to FIRPTA if (1) the REIT is regularly traded on an established securities market, and (2) the shares are sold by a foreign investor that owns 5 percent or less of the REIT (at all times during the previous five years). (The previously discussed recent legislation expands this exception by increasing this foreign ownership threshold from 5 percent to 10 percent.) Second, foreign shareholders are not taxed if the owned REIT is domestically controlled.¹⁷

¹⁷ The term "domestically controlled" is defined to mean that less than 50 percent in value of the REIT has been owned (directly or indirectly) by foreign shareholders during the five-year period ending on the date of stock sale. Given the tax rules for gain on sale of REIT shares (domestically controlled requirement) in comparison to REIT capital gains dividend distributions (5 percent or less and publicly traded requirement), it has been suggested that a foreign investor might consider a "dividend play" to convert impending REIT dividends into gain from the sale of REIT shares by selling REIT shares after a dividend has been declared but before the ex-dividend date and then repurchasing the shares. Such a strategy is not costless. It involves transaction costs and potential home country tax consequences.

We have found no non-domestically-controlled publicly-traded U.S. REITs.¹⁸ However, it may be difficult for a foreign shareholder to determine domestically controlled status, as there does not seem to be any type of REIT reporting requirement regarding shareholder composition. Therefore we surmise that many foreign shareholders rely more on the 5 percent or less exemption from U.S. income tax on gain from the sale of REIT shares than on the domestically controlled exception.

III. HYPOTHESIS DEVELOPMENT

As long as a REIT distributes 90 percent of its profits to its investors, it can avoid entity-level income taxes on these distributed profits. From 1980 to 2004, when REITs distributed capital gains from the sale of appreciated real estate to foreign investors, FIRPTA tax withholding applied with no exceptions and REITs were required to determine their foreign investors and withhold 35 percent of the profit and remit it to the federal government.¹⁹ As discussed in Section 2, the post-2004 capital gains withholding rate equals the one levied on distributions arising from rents and other sources of ordinary income *if* the REIT is publicly-traded *and* the foreign investor owns no more than 5 percent of the REIT (10 percent of the REIT after 2015).²⁰ The effect was to lower the withholding tax for qualifying foreign investors from

¹⁸ See Data section of this paper. While the authors have seen that most publicly-traded REITs appear to be domestically controlled, it is not clear how a foreign investor could make such a determination, especially given that the definition refers to shares being held directly or indirectly. This has led one commentator to declare that “Nothing in FIRPTA is clear.” Levy (2008). As of December 2015, this confusion was clarified by PATH, which created a presumption that all shareholders holding less than 5 percent of a REIT are U.S. persons unless the REIT has actual knowledge to the contrary.

¹⁹ Anecdotal accounts report that before the 2004 change it was unclear who was responsible for FIRPTA withholding. REITs took the view that the proper withholding agent was the street name broker; the street name brokers took the view that the proper withholding agents were the REITs. As described by an attorney advising clients on REIT tax withholding, there was a lot of confusion, and some withholding may not have occurred.

²⁰ We therefore limit our sample to observations of foreign ownership under 5 percent since those are the investors affected by the rate change. In practice, we have very few observations (less than 1 percent of our sample) with foreign ownership above 5 percent. One reason we expect that there are so few 5 percent+ observations is that foreign investors are aware of the tax consequences and therefore try to remain below this 5 percent threshold.

35 percent to no more than 30 percent, the maximum dividend withholding rate. This leads to the paper's first hypothesis, which concerns the investors' reaction to the withholding rate reduction:

H1: 2005 foreign investments in U.S. REITs moved inversely with the withholding tax rate on REIT capital gains, *ceteris paribus*.

Figure 1 details foreign investment in the publicly-traded U.S. REITs in our sample.²¹ No evidence of a positive correlation between the tax rate reductions and increased foreign investment in US REITs is immediately visible. Investment steadily increases from 2001 through 2004, is flat from 2004 to 2005, rises from 2005 to 2006, falls nearly back to 2004 levels by 2008, and soars thereafter.

Insert Figure 1

Besides the usual lack of power that thwarts empirical research, we may fail to find a positive correlation between tax rate reductions and foreign investment for at least four reasons. First, withholding taxes on REIT sales of real estate may have little impact on foreign portfolio investments. Instead, fundamentals, such as rental income, price appreciation, inflation, currency exchange rates, liquidity, and other non-tax considerations may dominate withholding taxes when foreign investor make decisions. Second, home country taxes may absorb any reduction in U.S. taxes, e.g., the home country may provide a credit for the U.S. REIT withholding taxes. If so, the reduction in U.S. withholding taxes will not affect the total global taxes of foreign investors. Third, some assert that foreign investors can structure their REIT investments to avoid negative tax implications.²² Fourth, the U.S. tax return filing requirements

²¹ Note that this only reflects the foreign investment in U.S. REITs in our sample. This notably excludes public U.S. REITs not included in our sample and all private U.S. REITs.

²² For a good discussion of FIRPTA 'blocker' avoidance structures in general, see Bear, Lillis, and Naylor (2010). However anecdotal evidence suggest that blocker structures caused too much tax friction to be used in publicly-traded REITs, and prior to 2004 the preferred capital gains evasion strategy for foreign investors was to sell REIT

under FIRPTA may be far more onerous than the actual cash taxes paid. If so, the 2004 relief from FIRPTA would have increased foreigners' incentives to invest in U.S. REITs, however, the change in incentives would have been constant across REITs regardless of the change in withholding rates. Thus, we may find that foreign investment increased overall, but that the increases from countries where withholding rates tumbled the most were no different than the increases from those countries where rates fell little. Thus, it is an empirical question whether the 2004 change in withholding rates affected foreign investments in U.S. REITs.

We now turn to the implications of the 2004 legislation on publicly-traded REIT managers. Before the FIRPTA capital gains carve out, REITs managers may have been sensitive to FIRPTA costs and complexities associated with the sale of appreciated real estate for both themselves and their foreign investors, creating disincentives to sell appreciated property. We speculate that this feedback loop may have been generated by either REIT manager concern about the significant penalties for non-compliance with FIRPTA withholding, or advice from investment brokers or traders about the impact of capital gains on foreign investment.²³

Although foreign investors account for a small percentage of publicly-traded U.S. REIT ownership, anecdotal evidence suggests that the taxation of those investors is still a concern. For example, a 2014 National Association of Real Estate Investment Managers meeting featured a session entitled, "Fund Structuring Discussion: How best to structure for non-US investors? What are the innovations and best practices for tax efficiency? What are some of the problems

stock prior to the ex-dividend date. For a discussion of how lagged withholding rules complicated this strategy, see Ponda (1997).

²³ The FIRPTA tax withholding system requires a publicly-traded REIT or other withholding agent to properly determine whether the recipient of tax withholding distributions is a foreign person, the applicable tax rate that applies for the type of distribution, and relevant tax treaties. If the recipient of the distribution is a pass-through entity, there is a requirement that the beneficial owner be identified, and the pass-through withholding agent must be qualified and registered with the IRS.

that can and should be avoided?”²⁴ In addition, many real estate trade associations, including the National Association of Real Estate Investment Trusts (NAREIT), actively supported FIRPTA legislative reform.²⁵ Many of the REITs in our sample are members of NAREIT, suggesting that the taxation of these foreign investors is a significant consideration for these REITs. If so, the 2004 legislation may have reduced REIT manager sensitivity to FIRPTA, and in particular, those REITs whose foreign investors benefited the most from the legislation may have sold off more appreciated properties than other REITs did once the new law became effective. This potential relaxing of the FIRPTA lock-in effect leads to the second hypothesis:

H2: A REIT’s change in realized capital gains after 2004 moved inversely with the capital gains withholding tax rates of its foreign investors, *ceteris paribus*.

If attracting and retaining foreign investment is important to REIT managers, we anticipate that there was a negative correlation between the realized capital gains and the capital gains withholding rates of its foreign investors.

Insert Figure 2

Figure 2 seems to provide support for our hypothesis. We see increases in capital gains distributions from 2002 to 2004 that become steeper from 2004 to 2007. For comparison, we also graph the Moody’s/RCA real estate index to show general commercial real estate appreciation over the same time period. Although the distributions generally follow the index trend, the rise in the index through 2007 is less pronounced than the increase in distributions during that time. However, we are still likely to detect no managerial response to the

²⁴ The meeting agenda is posted at http://www.nareim.org/wp-content/uploads/2014/04/NAREIM_2014_A-ITAgenda_FINAL_LR_SP.pdf.

²⁵ For an example of such support see a letter from NAREIT to Representative Joseph Crowley, in support of FIRPTA reform, dated July 29, 2010 at [https://www.reit.com/sites/default/files/media/Files/Policy/NAREIT%20Letter%20in%20Support%20of%20HR%205901%20\(7-29-10\).pdf](https://www.reit.com/sites/default/files/media/Files/Policy/NAREIT%20Letter%20in%20Support%20of%20HR%205901%20(7-29-10).pdf).

liberalization of FIRPTA rules if attracting and retaining a foreign investor (whose ownership must be less than 5 percent of the REIT) is less important to REIT managers than other goals, such as holding an efficient portfolio of real estate properties. If few REITs are sufficiently desirous of foreign investors, we may fail to have enough power to detect any managerial response to FIRPTA liberalization. Furthermore, we may fail to reject the null hypothesis because the foreign investors are too few in number to influence the REIT managers or the REIT managers are not incentivized to act in consideration of FIRPTA withholding requirements or the after-tax interests of their REIT investors.

IV. RESEARCH DESIGN

Regression Equation

The existing literature includes a number of papers on foreign investment. However, many of these papers explore foreign direct investment (FDI), while in our setting we are examining foreign portfolio investment (FPI).²⁶ Many FPI papers either examine FPI from the U.S. into foreign countries (e.g. Desai and Dharmapala 2009) and/or they do not consider taxes in their analysis (e.g., Cai and Warnock 2006). In our setting we are looking at foreign investment from a variety of countries, but only into the U.S. and only into a very specific type of asset – shares of publicly-traded U.S. REITs. Given these significant differences from the existing literature, we attempt to develop a model that is appropriate for this setting. Consequently, to test the first hypothesis about the responsiveness of investors to tax changes, we start by expressing the investment from all investors in a foreign country into a single U.S.

²⁶ See Hines and Rice (1994) or Huizinga and Laeven (2008) for examples of papers on FDI.

REIT (*ForInv*) as a function of the REIT (*REIT*), the country (*COUNTRY*), and the capital gains withholding tax rate the U.S. applies to investors from that country (*taxrate*):

$$ForInv_{ijt} = f (REIT_i, COUNTRY_j, taxrate_{jt}) \quad (1)$$

We take that expression for 2004 and 2005 to see how foreign investors respond to the change in tax rate. We subtract the 2004 expression from the 2005 expression, and we then move 2004 foreign investment to the right hand side of the equation as a control variable. Since the REIT and the country are the same in both years for any pair and the 2004 capital gains withholding tax rate is a constant 35 percent for all observations, we can focus on the new withholding tax rate for the given investor country.²⁷ The lower the 2005 withholding tax rate, the larger the decrease in tax rate for a given country. We then take the natural log of the entire equation, allowing us to examine the elasticity of foreign investment to a change in the withholding tax. This leaves the following expression to estimate:

$$\ln ForInv_{ij\ 2005} = \beta_0 + \beta_1 \ln ForInv_{ij\ 2004} + \beta_2 \ln taxrate_{j\ 2005} + \varepsilon_{ij} \quad (2)$$

We will interpret a negative coefficient on β_2 as consistent with the capital gains withholding taxes under FIRPTA constraining foreign investment in U.S. REITs.

Regrettably, our model does not account for home country taxation. The reason is that our data do not list the ultimate beneficial owner, only the name of their broker.²⁸ Therefore, we cannot determine with relative certainty what additional foreign country tax consequences will

²⁷ To help address the possibility of REIT or country effects in this model we use firm-clustered standard errors and we conduct robustness tests, discussed in Section 6, related to possible REIT or country effects.

²⁸ Ideally, we would like to have the names and countries of all shareholders of record. Tracking individual investors is problematic since they tend to hold securities in “street name”, meaning that the name of the beneficial owner of the stock does not appear on the REIT shareholder record file; instead, the stock is registered in the beneficial owner’s broker’s name. However, the SEC 13F filing requirements allow us access to specific information about the holdings of large institutional investment managers regardless of holdings in street name rather than beneficial ownership. This is in keeping with the data used by Chan, Leung, and Wang (1998), when they examined the strategies of institutional investors investing in REITs, and is reasonable given that institutions tend to dominate trading in REITs.

apply to a given distribution.²⁹ This incompleteness in the data should only bias against our finding results. If a given country's tax system for a particular investor would negate the drop in the U.S. withholding rate (e.g., the applicable home country rate is higher than the withholding rate and/or the mechanics of the home country's foreign tax credit are such that the value of the credit drops with the withholding rate), then investing in U.S. REITs should not have become less costly in 2005 for that investor. Therefore, we would not expect to see the increase in investment correlated with the amount of the rate drop as we predict.³⁰

The second hypothesis concerns the sensitivity of REIT managers to changes in the withholding taxes for foreign investors. In the investment setting we can observe investment from each country into each REIT. However, the managers setting is slightly different. When a manager makes decisions regarding capital gains, she cannot independently decide on an amount of capital gains to pay investors in each investing country. Rather, the manager must decide on a single amount of capital gains that will then be distributed to all investors (foreign and domestic) proportionally based on ownership. In H2 we posit that REIT managers take the taxation of all foreign investors into account when making that capital gains decision. Therefore, we begin by stating the capital gains distributions for any U.S. REIT (CG) as a function of the characteristics of that REIT ($REIT$) and the aggregate tax incentives of its foreign investors. Note that in equation (1) the observations are at the REIT-country-year level while here the observations are

²⁹ Since our data only provide the identity of the broker, not the ultimate beneficial owner, we cannot be certain that investors are not treaty shopping and investing through brokers in other countries that have lower treaty withholding rates. However, even if this is happening, our results still suggest that tax rate is an important consideration when investors are selecting the country of the broker they use. If these beneficial owners were choosing institutional investors in other countries with no concern for tax rate that would just be noise, biasing against us finding significant results.

³⁰ Using data from Amiram and Frank (2015) we investigated the home country taxation of dividends for the countries in our sample. Almost all of the observations in our sample fall under a foreign tax credit system (as opposed to a foreign tax deduction or no relief system), providing further evidence that it is not simply home country taxation that is driving our results. We thank Mary Margaret Frank and Dan Amiram for access to the data.

at the REIT-year level because the manager cannot make separate capital gains decisions for each investing country. We estimate taxes, using a measure we term the “weighted mean tax rate” ($wm\tau$), to provide the final component of equation (3):

$$CG_{it} = f(REIT_i, wm\tau_t) \quad (3)$$

The $wm\tau$ is intended to provide a single statistic that captures the aggregate tax position of the foreign investors in a particular REIT. To compute $wm\tau$, we compute a weighted tax rate for all foreign investors in a particular REIT. For example, suppose 2 percent of the REIT’s investors are Japanese facing a 10 percent withholding tax rate; 1 percent are Canadian with a 30 percent withholding tax rate; and the remainder are Americans not subject to any withholding. Then, that REIT’s weighted mean tax rate ($wm\tau$) would be 0.5 percent.³¹ We expect capital gains to be decreasing in the weighted mean tax rate because REIT managers can mitigate withholding taxes for their foreign investors by minimizing their sales of appreciated property. The greater a REIT’s $wm\tau$, the greater its incentives to avoid liquidating real estate that will generate capital gains.

To estimate the model, similar to our investment setting we subtract the expression for 2004 from the expression for 2005, moving 2004 capital gains to the right hand side of the equation as a control variable. Since the REIT term falls out of the equation, we can focus on the weighted mean foreign investor tax rate in the following expression:³²

$$\ln CG_{i,2005} = \beta_0 + \beta_1 \ln CG_{i,2004} + \beta_2 \ln wm\tau_{i,2005} + \beta_3 \ln wm\tau_{i,2004} + \varepsilon_i \quad (4)$$

We will interpret a finding that $\beta_2 < \beta_3$ as evidence that REIT managers incorporate U.S. withholding taxes of their foreign investors into their portfolio management decisions. A negative β_2 is consistent with avoiding capital gains when aggregate withholding taxes are

³¹ $(10\% * 2\%) + (30\% * 1\%) = 0.5\%$.

³² As with our model for H1, we use firm-clustered standard errors to help address the possibility of a REIT effect.

relatively high. A positive β_3 is consistent with realizing capital gains in 2005 after a year of relatively high withholding taxes (2004) has elapsed, a withholding tax version of the well-known capital gains tax lock-in effect (for further discussion, see Burman (1999) and Dai, Maydew, Shackelford, and Zhang (2008), among many others). By comparing the coefficients on the two weighted mean tax measures, we can assess whether capital gains realizations are consistent with foreign investors' tax incentives mattering to REIT managers.

Data

To conduct these tests, we use data from FactSet, NAREIT, Compustat, the Center for Research in Security Prices (CRSP), and SNL Financial. FactSet provides institutional shareholder records, including country of residence, type of investor (e.g., pension fund, investment adviser, or mutual fund manager), and investor position (number of shares held), for U.S. REITs in 2004 and 2005. The shareholders identified are primarily based on 13F filings with the Securities and Exchange Commission (SEC), and include institutional investment managers with over \$100 million of equity investments that bought REIT stock for either their own account or as an investment manager with discretion over which securities are bought and sold for the accounts of others. They include investment funds, banks, insurance companies, broker-dealers, pension funds, and corporations.³³ For each year, we determine the percentage of

³³ Foreign institutional investment managers are required to file Form 13F if they: (1) use any means or instrumentality of United States interstate commerce in the course of their business; and (2) exercise investment discretion over \$100 million or more in Section 13(f) securities. For our analyses we focus on the non-pension/non-governmental investors since the pensions and governmental entities in our sample are not subject to withholding. We exclude these observations from our sample since there is no variation in their withholding tax rate during in our sample period.

shares held by all non-pension, non-governmental, foreign institutional investors for each REIT as well as the percentage of shares held by specific country institutional investors for all REITs.

Our sample comprises investments from 17 foreign countries into 95 U.S. REITs for which we have complete information for both 2004 and 2005.³⁴

Insert Table 2

Table 2, Panel A indicates that the typical REIT in our sample is large with revenues of nearly \$600 million and assets of \$3.8 billion but has little foreign ownership (1.53 percent). The relatively few shares owned by investors from abroad is consistent with both home bias and FIRPTA dampening foreign interest in U.S. REITs. It also raises doubts about whether the tax considerations for such a small set of investors matter to REIT managers and, even if they do, whether the standard crude instruments available to an empiricist will be capable of detecting their importance.

Table 2, Panel B shows that the sample REITs come from all forms of real estate, led by multi-family (11 REITs, 12 percent of the sample), office (12 percent), shopping center (12 percent), and health care (9 percent). In short, the sample is not concentrated in any particular property type. Table 2, Panel C shows that foreign investors in these U.S. REITs in 2005 are similarly dispersed across the 17 countries. In 2005, 20 percent of the investors are British; 19 percent are Canadian; 19 percent are Japanese; 7 percent are Belgian. In untabulated results, we find that of the sample's 95 REITs, eleven have investors in 2005 from ten or more countries. Eleven REITs have foreign investors from only one country.

³⁴ We require observations to have 2004 data because our model includes prior year variables. We cannot analyze 2004 or earlier years in our sample because there was no variation in withholding tax rate during those years. All of the foreign investors in our sample were subject to a 35 percent withholding rate prior to 2005.

V. RESULTS

H1: Responsiveness of Foreign Investors

Insert Table 3

Table 3, Panel A shows that the dependent variable in equation (2), i.e., investment from investors in a specific country to a particular U.S. REIT, soared from 2004 to 2005. Specifically, the mean (median) foreign investment jumped from \$5.34 million (\$1.2) in 2004 to \$10.1 (\$1.8) million in 2005. Although this is consistent with the liberalization of the FIRPTA rules beginning a boost in foreign investment in U.S. REITs, we further investigate the relation between the 2004 legislation and the increase in foreign investment to determine whether investment varied with the differential change in tax treatment. To test such a proposition, we next estimate equation (2).

Table 3, Panel B provides summary statistics from estimating equation (2). As predicted, the coefficient on the log of the capital gains withholding tax rate ($\ln \tau$) is negative and significant at the 0.01 level, indicating that 2005 inbound investments in U.S. REITs moved inversely with each country's withholding rate, conditional on 2004 investments. The tax coefficient implies that the impact of the 2004 legislation was economically significant. Evaluated at the mean of the dependent variable, an interquartile reduction in *taxrate* (i.e., from 30 percent to 15 percent) boosted foreign investment from \$2 million to \$3.5 million.³⁵ In other words, if the 2004 legislation resulted in a country's capital gains withholding rate dropping from 35 percent to 15 percent, the residents from that country invested 75 percent more in 2005 in a particular U.S. REIT than they did if the rate only fell to 30 percent, *ceteris paribus*. In

³⁵ The mean dependent variable is 14.51 or \$2 million. 14.51 less -0.5676 (the product of the τ coefficient and the interquartile shift in the natural logarithm of τ) is 15.08 or \$3.5 million.

short, the evidence suggests that when the FIRPTA taxes were cut, investment rose, and the increases varied across countries depending on the amount of the rate reductions. Not surprisingly, the other regression coefficient, the one on lagged investment, is positive and highly significant, consistent with investment being sticky.

The parsimony of the research design might suggest that the model lacks adequate controls. However, it is difficult to conjecture alternative explanations for these findings. Any alternative explanation must explain how the relationship between the investors from 17 countries and 95 U.S. REITs changed between 2004 and 2005 in a way that was correlated with the pre-existing dividend withholding rates that only became effective for capital gains when the 2004 legislation was enacted. Unable to think of any such explanations, we conclude that these findings are consistent with FIRPTA taxes constraining foreign investment in U.S. REITs.

The theory supporting our prediction for the relation between changes in investment and withholding rates from 2004 to 2005 should hold for all years. While we would have expected the most dramatic shift to have occurred with the initial relaxing of the FIRPTA rules in 2004 for all countries, the U.S. and its trading partners occasionally revise their tax treaties. Sometimes the revisions alter the dividend withholding rates. Consequently, some capital gains withholding rates for REITs change most years.³⁶ Thus, we would expect to find the same negative relation between investment and withholding rates in other years. When we expand equation (2) beyond the 2004-2005 pair, we need to add a new lagged tax term, thus the expanded model is:³⁷

$$\ln ForInv_{ijt} = \beta_0 + \beta_1 \ln ForInv_{ijt-1} + \beta_2 \ln taxrate_{jt} + \beta_3 \ln taxrate_{jt-1} + \varepsilon_{ij} \quad (5)$$

³⁶ It is possible that U.S. REITs and foreign investors could be lobbying to affect tax treaty negotiations. However, to our knowledge, no one has reported or suggested such an impact. Treaty negotiations are often complex and involve various issues beyond just the dividend withholding rates. Therefore, we conclude it is unlikely that foreign REIT investor pressure on treaty terms is solely driving our results.

³⁷ Recall that all capital gains withholding tax rates were 35 percent in 2004. Thus, no lagged tax rate was needed in the equation (2).

We now predict that $\beta_2 < \beta_3$. As before, a negative β_2 is consistent with U.S. REIT investment coming from (withdrawing from) countries when withholding tax rates have fallen (risen). We expect the coefficient on the lagged tax rate will be greater than the coefficient on the current tax rate because the former will capture low (high) investment in the previous year when tax rates were higher (lower) than in the present year. By comparing the two tax coefficients, we can assess whether foreign investment into U.S. REITs is sensitive to U.S. capital gains withholding taxes.

The second column in Table 3, Panel B reveals a negative and significant β_2 and positive β_3 . When we compare the two coefficients, as predicted, we find $\beta_2 < \beta_3$ and significant at the 0.01 level. This is consistent with capital gains withholding taxes adversely affecting foreign investment in U.S. REITs from 2005-2010, i.e., more than just the year of the initial legislative change.

H2: Responsiveness of REIT Managers

Insert Table 4

Table 4, Panel A shows that mean realized capital gains increased by nearly half from \$25.3 million in 2004 to \$34.7 million in 2005. Did macroeconomic factors, such as an improving real estate market, fully explain this increase in capital gains realizations? Or could the relaxation in FIRPTA withholding taxes have contributed to the surge? To identify whether any of the increase in capital gains may have had a tax motivation, we search for a link between the increase in the capital gains by a specific REIT and the change in the withholding taxes faced by the foreign investors in that REIT.

The first column of Table 4, Panel B shows summary statistics from estimating equation (4). Recall that we predict that $\beta_2 < \beta_3$, indicative of REIT managers considering the U.S. withholding taxes of their foreign investors in their real estate portfolio management. We find that neither tax variable is significantly different from zero. Thus, we are unable to reject the null hypothesis.

One reason that regression equation (4) may be insufficiently powerful to reject the null is that the tax measures ($wm\tau$) include both the effect of changes in the tax rates *and* the effect of changes in the mix of foreign ownership. For example, recall that $wm\tau$ is 0.5 percent if 2 percent of the REIT's investors are Japanese with a 10 percent withholding tax rate and 1 percent are Canadian with a 30 percent withholding tax rate. However, suppose that the rates are unchanged, but Canadian investors purchase all of the Japanese shares. Then, the $wm\tau$ would jump to 0.9 percent, implying that the U.S. increased its withholding tax rates when actually the mix of foreign investors was the only change. Therefore, to tease out the effect related to rate changes alone, we need a refined tax measure that is unimpeded by ownership changes.

We start by recognizing that $wm\tau_t$ is the foreign ownership at the beginning of t times the applicable withholding tax rates for t . Taking differences between two years:

$$\begin{aligned} wm\tau_{2005} - wm\tau_{2004} &= rate_{2005} * own_{2005} - rate_{2004} * own_{2004} \\ &= (rate_{2005} - rate_{2004}) * own_{2004} + (own_{2005} - own_{2004}) * rate_{2005} \end{aligned} \quad (6)$$

The first term, $(rate_{2005} - rate_{2004}) * own_{2004}$, becomes the primary variable of interest, labeled as *ratechange*. It captures the change in tax rates, holding constant foreign ownership.

We now substitute the new terms for $wm\tau_{2005}$ and $wm\tau_{2004}$ and reestimate equation (4).³⁸

$$\ln CG_{it} = \beta_{0t} + \beta_1 \ln CG_{it-1} + \beta_2 ratechange_{it} - \beta_3 ownchange_{it} + \varepsilon_{it} \quad (7)$$

We predict a negative sign on the change in tax rates, consistent with REIT managers realizing more capital gains as tax rates fall for their foreign investors. We have no prediction for the second term from equation (6), labeled as *ownchange* in equation (7). It serves solely as a control.

The second column of Table 4, Panel B shows that the coefficient on the change in rates is negative, as predicted, but the coefficient is insignificant. This failure to reject the null could arise for a variety of reasons. First, the sample size is small ($n = 61$). Second, the sale of large commercial properties typically involves a significant lag time. Third, REIT managers may not know or care about foreign investors, although anecdotal evidence suggests that this is not true.

To address the first two concerns, we expand the analysis to include all observations through 2009, adjusting the other regression variables and adding annual categorical variables.³⁹ Table 4, Panel B shows that, when we estimate equation (7), β_2 remains negative and is now significant. This finding is consistent with REIT managers altering their portfolio rebalancing to minimize their foreign investors' U.S. withholding taxes. Evaluated at the mean of the dependent variable, an interquartile reduction in *ratechange* (i.e., from 0 to -2.42) boosted capital

³⁸ In practice we take the natural log of (capital gains distributions +1) so that we can maximize our sample size and include REITs that made no capital gains distributions in a given year. Unlike the weighted mean tax variables in equation (4), we cannot take natural logarithms of the two new terms because they are sometimes negative.

³⁹ We do not extend our sample to 2010 here because there were no withholding rate changes in our sample from 2009 to 2010.

gains from \$50 thousand to \$70 thousand.⁴⁰ The coefficient on *ownchange* is also significant. We also estimate equation (7), but without *ownchange* (results untabulated). The coefficient on *ratechange* remains negative (-0.11) and statistically significant. Together, these results suggest that the separation of rate and ownership effects is necessary to understand the tax impact on portfolio management decisions.⁴¹

VI. ROBUSTNESS TESTS

H1: Responsiveness of Foreign Investors

As discussed earlier, it is highly unlikely that a correlated omitted variable is driving our results given our setting. In the investment sample investors from all countries experience a rate change in 2005, but only investors from select countries experience a second rate change in the remaining years of the sample. For example, French investors experience a change in rate from the uniform 35 percent in 2004 to 30 percent in 2005 based on the existing U.S.-France tax treaty at that time. However, French investors experienced a second rate change as the rate dropped from 30 percent to 15 percent for dividends paid on or after February 1, 2007. It is very improbable that there is an omitted variable that would be highly correlated with this pattern of tax rate changes. However, we run several robustness tests to provide additional support for our results.⁴²

⁴⁰ The mean dependent variable is 10.83 or approximately \$50 thousand. 10.83 less -0.3388 (the product of the *ratechange* coefficient and the interquartile shift in *ratechange*) is 11.17 or approximately \$70 thousand.

⁴¹ To be sure that our results in this longer time period are not being affected by the fact that some listed U.S. REITs were sold to private investors during this time period we examine the REITs in this sample. None of the REITs in our sample went private during this time period. The majority of the REITs have observations for at least four of the five years in this sample. In addition, results (untabulated) remain unchanged if we limit our sample to REITs that appear all five years in the sample.

⁴² Given the large number of robustness regressions we run in regards to H1, all results are untabulated.

First, to address the concern that another country-level factor may be driving these results and that factor is being captured by our current year tax rate variable we rerun the regression for foreign investment for the full 2005 through 2010 sample (Table 3, Panel B, Column 2), but we also include country fixed effects. Our inferences remain unchanged. To address the concern that investment may somehow be related to home-country economic growth we also rerun the same regression, but instead of country fixed effects we include control variables for the natural log of home country GDP in years t and $t-1$, analogous to our tax rate variables in the regression.

$$\begin{aligned} \ln ForInv_{ijt} = & \beta_0 + \beta_1 \ln ForInv_{ijt-1} + \beta_2 \ln taxrate_{jt} + \beta_3 \ln taxrate_{jt-1} \\ & + \beta_4 \ln GDP_{jt} + \beta_5 \ln GDP_{jt-1} + \varepsilon_{ij} \end{aligned} \quad (8)$$

Again, the coefficient on our current year tax rate variable remains negative and significant at the 1 percent level. Similarly, we include a control variable for year-end currency exchange rates between the U.S. and the investor country to ensure our results are not driven by currency fluctuations. Again our inferences are unchanged.

Next, to help ensure that we are not just capturing increased investment into larger, more attractive REITs we take the regression with GDP control variables from our first robustness test and we also add a control variable for size (using, alternatively, annual REIT sales and year-end REIT total assets). In both cases the coefficient on our current year tax rate variable remains negative and significant at the 1 percent level.

Finally, we then remove each year from our sample one at a time to ensure that no single year is driving our results. The coefficient on the current year tax variable remains negative and statistically significant. Similarly, to ensure that no single country is driving our results we remove each country from our sample one at a time. Again, our inferences remain unchanged. In total, all of these robustness tests provide support that we are capturing an increased level of

foreign investment related to tax rate changes and not driven by other REIT, country, or year effects.⁴³

H2: Responsiveness of REIT Managers

Given the construction of our *ratechange* and *ownchange* measures, it is highly unlikely that another unobserved factor is driving our results. First, every country's rate changed in 2005 while only certain countries experienced additional rate changes in subsequent years. Second, we capture not only the mix of investor countries for a given REIT, but also the weight of each country's investment as a percentage of overall investment in that REIT, which is unique for each REIT-year. Therefore it is highly unlikely that an unobserved variable is both correlated with our main variable of interest, *ratechange*, and a determinant of the capital gains paid by REITs. However, to provide further assurance of our results, we close with four sets of sensitivity tests.

First, our results in Table 4, Panel B indicates that there is an inverse correlation between U.S. REITs' realized capital gains and the U.S. withholding taxes for their foreign investors. Perhaps foreign investors tend to be drawn to larger, more liquid U.S. REITs. To test for size effects, we re-estimate equation (5), including a control for REIT size:

$$\ln CG_{it} = \beta_0 t + \beta_1 \ln CG_{it-1} + \beta_2 \text{ratechange}_{it} - \beta_3 \text{ownchange}_{it} + \beta_4 \text{size}_{it} + \varepsilon_{it} \quad (9)$$

Table 5, Panel A shows that including a control for size (REIT sales in Column 1 and REIT total assets in Column 2) has little impact on the coefficient of interest, β_2 .

Insert Table 5

⁴³ Since our investment variable is calculated as share price multiplied by number of shares owned we also confirm that the increase in investment is not driven solely by price increases by examining shares owned and percentage of outstanding shares owned.

Second, as discussed previously, the law change only affected the withholding taxes on capital gains distributions. Thus, we would not expect similar patterns in and after 2005 for other forms of REIT distributions. To ensure that this is the case, we undertake falsification tests, estimating equation (9) with ordinary distributions and return of capital distributions in lieu of capital gains distributions. If we find significant results, using distributions for which taxes were not altered, the conclusions from above would be drawn into question. Consistent with our original inferences, we find no significant results. In Table 5, Panel B, we find that the coefficients on *ratechange* and *ownchange* remain insignificant across all specifications.

Third, to test whether the response by REIT managers is limited to a particular subset of REITs, we classify the REITs based on the type of property they hold.⁴⁴ Therefore, we rerun the regression from Table 4, Panel B, Column 3, excluding each REIT property-type group one at a time. Results (untabulated) remain unchanged from those reported in Table 4, indicating that no single REIT property-type group drives the results.⁴⁵ Similarly, to ensure our results are not being driven by a specific year in our sample period we exclude each year (2005 through 2009) from our sample one at a time. (Results untabulated.) Our inferences remain unchanged.⁴⁶

Finally, we consider the possible effect of additional REIT legislation passed during our sample period. The Housing and Economic Recovery Act of 2008 (HERA) was signed into law

⁴⁴ These categories are listed in Table 2, Panel B. Our sample for the capital gains tests varies from the investment test sample described in Table 2, Panel B. However, there is a great deal of variation in this sample as well. The two most popular categories, Office and Shopping Center REITs, each only make up approximately 13 percent of our observations in the capital gains sample.

⁴⁵ Ideally we would also like to confirm that no single investor country is driving our results. Unfortunately, it is not possible to remove a given country from our sample since our observations are at the REIT level, not the country level. Our tests rely on the weighted average (for a given REIT) of investors from various countries and the tax rates in those countries. To remove a given country while calculating those ownership and rate variables would essentially leave us with meaningless data with no tie to the REIT's actual investor base.

⁴⁶ When we drop 2009 from our sample the coefficient on *ratechange* remains significant, but now at the 10 percent level.

on July 30, 2008.⁴⁷ HERA loosened restrictions on so called “prohibited transactions” for REITs. For example, prior to HERA a REIT had to hold a property for at least four years before selling it in order to avoid the sale being classified as a prohibited transaction. As a result of HERA, the holding period requirement dropped from four years to two years. It seems possible that the easing of such restrictions may have led to more asset sales and more capital gains distributions from U.S. REITs. To ensure that our results are not being driven by this legislation we conduct two robustness tests. (Results untabulated.) First we drop 2008 and 2009, eliminating the entire post-HERA period from our sample. *Ratechange* still has a significant and negative coefficient, indicating that our results are not being solely driven by HERA.⁴⁸ Next, we consider that although HERA may not be driving our results the loosening of sales restrictions under HERA may have given REIT managers the opportunity to be even more responsive to foreign investors’ tax rates. To test this possibility, we take equation (7) and add the variable *post*, which equals one for observations in the post-HERA period. We then interact *post* and *ratechange*. The coefficient on *ratechange* remains negative and statistically significant, while the coefficient on the interaction term is negative but not statistically significant. This is consistent with HERA’s having no effect on managers’ sensitivity to foreign investors’ tax rates. In summary, all of our robustness findings are consistent with REIT managers responding to foreign investor withholding tax changes by managing REIT capital gains distributions.

⁴⁷ The act signed into law contained most of the provisions of a similar piece of legislation, the REIT Investment Diversification and Empowerment Act of 2007, which was championed by the REIT industry.

⁴⁸ As with when we drop 2009 from our sample, the significance of the *ratechange* coefficient is now at the 10 percent level.

VII. CLOSING REMARKS

Although tax policy plays an important role in the real estate industry, remarkably little empirical research has been conducted about the impact of taxes on real estate at the investor and manager level. This paper exploits the identification provided by a change in the taxation of REIT capital gains for foreign investors to expand our understanding of both investor and manager behavior. Specifically, an exogenous shock to the tax system enables us to explore both the responsiveness of real estate investors to changes in their own taxes and the responsiveness of real estate managers to changes in their investors' taxes. We find evidence consistent with foreign investors responding to the 2004 reduction in capital gains withholding taxes, as well as evidence that rate reductions impacted REIT managers' real asset disposition strategies. We interpret these results as evidence that FIRPTA restricts the flow of foreign capital into U.S. REITs and affects the management of REITs.

Our findings add a contrary observation to prior research that found that individual taxes of investors—unless they are very large shareholders or insiders—rarely affect the payout decisions of managers of publicly traded companies and mutual funds (Brown, Liang, and Weisbenner 2007). In contrast, we find that the rate reductions of a small group of individual investors did have an impact on the portfolio decisions of publicly-traded REITs. These results are worthy of further work to determine the unique factors in the REIT setting and/or the other considerations that explain this divergence from prior work.

This paper should encourage further general study about the role of taxes in real estate investment and management. Few industries are so large, so influenced by tax policy, and so understudied. Second, more generally, the findings in this paper should expand our understanding of the role of taxes in foreign portfolio investment, which is increasingly

important in a global capital market. Finally, the inferences from this paper should be useful to Congress and other policymakers as they continue to consider additional liberalization of the FIRPTA rules. The results from this investigation would imply that further changes, e.g., the 2015 ownership cap increase from 5 percent to 10 percent, would increase the flow of foreign capital to U.S. REITs. This does not necessarily mean that it would substantially increase foreign investment in U.S. real estate. Perhaps foreign investors already employ tax plans that enable them to avoid the deleterious effects of FIRPTA. If so, the results from the 2004 change would suggest that U.S. REITs may be a more efficient means for at least some of foreign investors to invest in U.S. real estate.

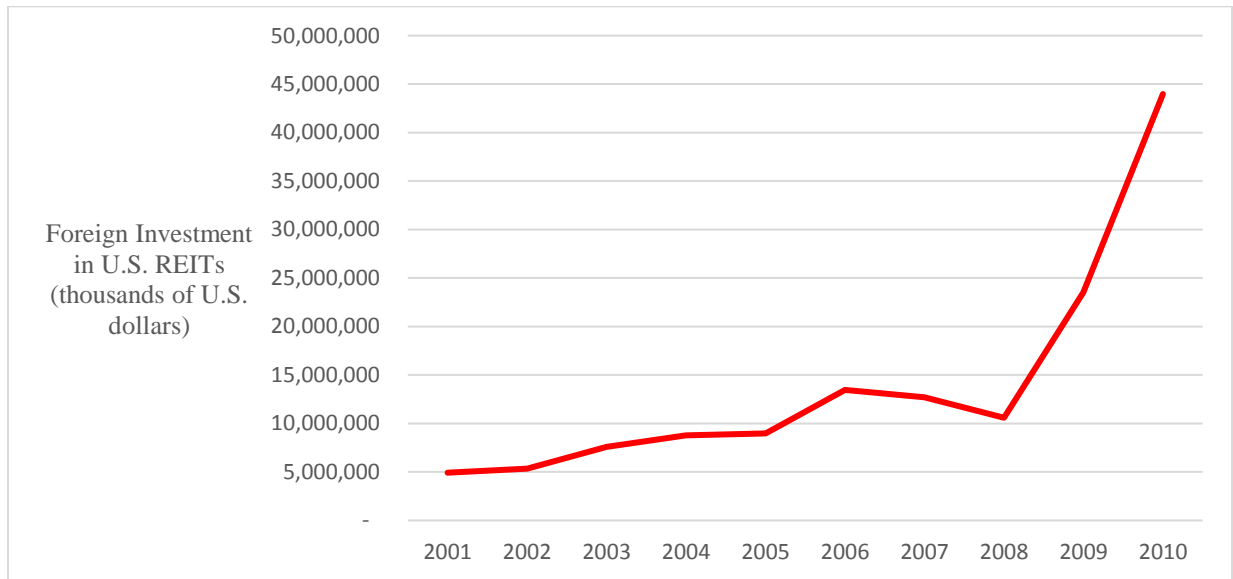
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Figure 1

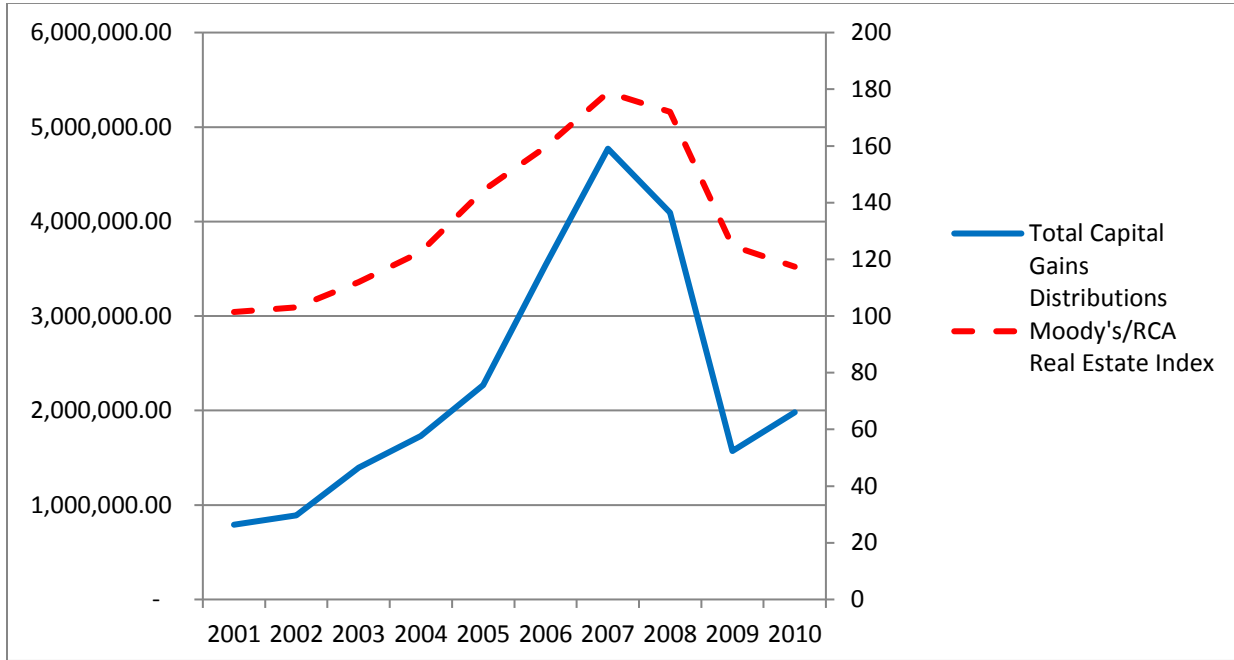
Foreign Investment in U.S. REITs



Investment in the publicly-traded U.S. REITs included in our sample. Amounts in thousands of U.S. dollars. Investment each year is calculated as *Position* (number of shares held by the investor, FactSet) multiplied by *Price* for December (CRSP monthly stock files) of that year for that U.S. REIT, summed over all foreign/domestic owners across all U.S. REITs for that year.

Figure 2

Capital Gains Distributions from U.S. REITs



Left-hand axis: Capital gains distributions paid by U.S. REITs in our sample. Calculated as capital gains distribution per share (NAREIT) multiplied by number of common shares outstanding (CRSP). Figures in thousands of U.S. dollars. Right-hand axis: Moody's/RCA CPPI (Commercial Property Price Indices).

Table 1

	U.S. Investors	Foreign Investors <i>pre-AJCA 2004</i>	Foreign Investors <i>post-AJCA 2004 pre-PATH 2015</i>	Foreign Investors <i>post-PATH 2015</i>
Distribution: Ordinary Dividends (from rental income)	Taxed at investors' ordinary income tax rate.	FIRPTA doesn't apply. 0-30% withholding rate for dividends based on tax treaties	No change	No change
Distribution: Capital Gain Dividends (from sales of real estate owned)	Taxed at investors' capital gains tax rate.	FIRPTA applies, no exceptions. 35% withholding; U.S. tax return required to be filed; tax treaties don't provide relief for	Exception: treated as ordinary dividend if (1) REIT traded on established securities market in the U.S., and (2) foreign investor owns 5% or less of REIT (at any time during 1 year prior)	Increased foreign ownership threshold exception from 5% to 10%; FIRPTA no longer applies to foreign pension funds and qualified collective investment vehicles
Distribution: Return of Capital	Not taxed (but reduces the tax basis of shares).	FIRPTA applies, with exceptions for (1) domestically controlled REITs, and (2) 5% or less ownership in publicly-traded REITs	No change	Increased foreign ownership threshold exception from 5% to 10%; FIRPTA no longer applies to foreign pension funds and qualified collective investment vehicles
Sale of Stock	Taxed at investors' capital gains tax rate.	FIRPTA applies, with exceptions for (1) domestically controlled REITs, and (2) 5% or less ownership in publicly-traded REITs	No change	Increased foreign ownership threshold exception from 5% to 10%; FIRPTA no longer applies to foreign pension funds and qualified collective investment vehicles

Table 2

Panel A – 2005 Sample Descriptive Statistics

	Mean	Std Dev	Min	25%	Median	75%	Max
Sales (millions of dollars)	570	714	26	150	333	685	3,901
Total Assets (millions of dollars)	3,816	4,501	197	1,189	2,160	4,542	25,307
Foreign Investment (thousands of dollars)	45,699	69,367	12	3,516	20,913	55,022	403,304
Foreign Ownership (percent)	1.53%	1.27%	0.01%	0.36%	1.18%	2.69%	4.46%
Capital Gains (thousands of dollars)	28,765	58,640	0	0	1,819	33,228	242,949

N = 95 for all variables except *Capital Gains*, where N=78. *Sales* is the REIT's annual net sales (Compustat). *Total Assets* is the REIT's year-end total assets (Compustat). *Foreign Investment* is calculated as *Position* (number of shares held by the owner, FactSet) multiplied by *Price* for December (CRSP monthly stock files) of the corresponding year, summed over all foreign owners for that REIT in a given year. *Foreign Ownership* is calculated as *Position* divided by *Common Shares Outstanding* (CRSP), summed over all foreign owners for that REIT in a given year. *Capital Gains* is calculated as total capital gains distribution per share (NAREIT) multiplied by *Common Shares Outstanding*.

Table 2

Panel B – REIT Property Type (SNL)

Property Type	Number of REITs – 2005 sample	Number of REITs – 2005-2010 sample
Diversified	7	8
Health Care	9	10
Hotel	8	10
Industrial	4	5
Manufactured Home	2	3
Multi-family	11	11
Office	11	15
Regional Mall	7	8
Retail: Other	6	6
Self-Storage	3	3
Shopping Center	11	13
Specialty	5	8
Undisclosed	11	24
Total	95	124

Table 2

Panel C – Country Frequency (FactSet)

Country	2005	2005-2010
Australia	0	208
Austria	7	100
Belgium	31	276
Bermuda	0	178
Canada	80	614
Denmark	12	121
France	17	408
Germany	8	264
Hong Kong	0	142
Ireland	16	146
Italy	2	112
Japan	80	564
Luxembourg	10	115
Netherlands	12	248
New Zealand	0	460
Norway	15	123
Singapore	1	195
Spain	21	110
Sweden	17	350
Switzerland	13	354
United Kingdom	88	635
Total	430	5,723

Table 3
Foreign Investment

Panel A
Descriptive Statistics – 2005 sample

Variable	Mean	Std Dev	Min	25%	Median	75%	Max
$\ln Y_{2005}$	14.51	1.84	9.36	13.19	14.42	15.59	18.96
$\ln Y_{2004}$	13.96	1.77	9.85	12.67	14.00	15.09	18.61
$\ln \tau$	2.97	0.41	2.40	2.77	2.77	3.43	3.43
Y_{2005} (in millions)	10.1	22.6	0.01	0.5	1.8	5.9	171.8
Y_{2004} (in millions)	5.3	14.0	0.02	0.3	1.2	3.6	120.6
τ	20.2%	8.4%	10.0%	15.0%	15.0%	30.0%	30.0%

Panel B
Regression Results

$$2005: \ln ForInv_{ij\ 2005} = \beta_0 + \beta_1 \ln ForInv_{ij\ 2004} + \beta_2 \ln taxrate_{j\ 2005} + \varepsilon_{ij\ 2005}$$

2005 – 2010:

$$\ln ForInv_{ij\ t} = \beta_0 + \beta_1 \ln ForInv_{ij\ t-1} + \beta_2 \ln taxrate_{jt} + \beta_3 \ln taxrate_{j\ t-1} + \varepsilon_{ijt}$$

Variable	(1) 2005 (n = 430)	(2) 2005-2010 (n = 5,723)
Intercept	7.21 *** (<0.0001)	4.78 *** (<0.0001)
$\ln Y_{t-1}$	0.71 *** (<0.0001)	0.79 *** (<0.0001)
$\ln \tau_t$	-0.86 *** (<0.0001)	-0.74 *** (<0.0001)
$\ln \tau_{t-1}$		0.25 *** (0.0087)

ForInv is *Foreign Investment*, as described in Table 2, summed for each REIT-country pair. $\ln ForInv$ is the natural log of *ForInv*. *taxrate* is the relevant withholding tax rate for each country. $\ln taxrate$ is the natural log of τ . Firm-clustered standard errors. The 2005-2010 regression also includes year indicator variables, but coefficients are not shown. P-values in parentheses. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 4
Capital Gains Distributions

Panel A
Descriptive Statistics – 2005 sample

Variable	Mean	Std Dev	Min	25%	Median	75%	Max
lnCG ₂₀₀₅	11.79	7.56	0	0	15.03	17.41	19.31
lnCG ₂₀₀₄	11.04	7.63	0	0	14.73	16.83	19.85
ln wmt ₂₀₀₅	2.43	0.83	0.31	1.85	2.34	3.10	3.96
ln wmt ₂₀₀₄	2.87	1.53	-0.87	1.89	3.32	4.06	5.26
CG ₂₀₀₅ (in millions)	34.7	63.9	0	0	3.4	36.5	242.9
CG ₂₀₀₄ (in millions)	25.3	65.2	0	0	2.5	20.4	418.9

Panel B
Regression Results

Column 1: $lnCG_{i,2005} = \beta_0 + \beta_1 lnCG_{i,2004} + \beta_2 ln wmt_{i,2005} + \beta_3 ln wmt_{i,2004} + \varepsilon_{ij}$
 Columns 2 and 3: $lnCG_{it} = \beta_{0t} + \beta_1 lnCG_{it-1} + \beta_2 ratechange_{it} - \beta_3 ownchange_{it} + \varepsilon_{it}$

Variable	(1) 2005 (n = 61)	(2) 2005 (n = 61)	(3) 2005-2009 (n = 353)
Intercept	4.55 * (0.0649)	5.25 *** (0.0038)	5.48 *** (<0.0001)
lnCG _{t-1}	0.53 *** (0.0002)	0.54 *** (<0.0001)	0.46 *** (<0.0001)
lnwmt ₂₀₀₅	0.45 (0.6770)		
lnwmt ₂₀₀₄	0.10 (0.8909)		
ratechange		-0.07 (0.2942)	-0.14 *** (0.0028)
ownchange		0.02 (0.5739)	0.04 ** (0.0238)

$\ln CG$ is the natural log of *Capital Gains* (as described in Table 1, Panel A). $\ln wmr$ is the natural log of the weighted mean tax rate as described on Section 4.1. *Ratechange* is calculated as $(\tau_t - \tau_{t-1}) * CountryPercentOwn_{t-1}$. τ is the relevant withholding tax rate for each country. *CountryPercentOwn* is the percentage of foreign ownership, summed for each REIT-country-year. *Ownchange* is calculated as $(CountryPercentOwn_t - CountryPercentOwn_{t-1}) * \tau_t$. Firm-clustered standard errors. The 2005-2009 regression also includes year indicator variables, but coefficients are not shown. P-values in parentheses. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 5
Robustness Test

Panel A – REIT Size Controls

Variable	(1) REIT Sales (n = 351)	(2) REIT Total Assets (n = 351)
Intercept	5.38 *** (<0.0001)	5.40 *** (<0.0001)
lnCG _{t-1}	0.45 *** (<0.0001)	0.45 *** (<0.0001)
ratechange	-0.12 *** (0.0073)	-0.13 *** (0.0061)
ownchange	0.03 ** (0.0356)	0.03 ** (0.0394)
sales	0.00 (0.3964)	
assets		0.00 (0.2748)

Panel B – Ordinary and Return of Capital Distributions

Variable	(1) Ordinary (n = 351)	(2) Ordinary (n = 351)	(3) Return of Capital (n = 351)	(4) Return of Capital (n = 351)
Intercept	4.88 *** (0.0029)	5.04 *** (0.0022)	6.57 *** (<0.0001)	6.52 *** (<0.0001)
$Indistributions_{t-1}$	0.74 *** (<0.0001)	0.72 *** (<0.0001)	0.43 *** (<0.0001)	0.43 *** (<0.0001)
ratechange	0.02 (0.3028)	0.03 (0.1761)	0.08 (0.2211)	0.09 (0.1652)
ownchange	0.01 (0.3864)	0.00 (0.5264)	-0.02 (0.2987)	-0.02 (0.3089)
sales	0.00 (0.4454)		-0.00 ** (0.0420)	
assets		0.00 *** (0.0052)		-0.00 (0.1473)

In each regression the dependent variable is the natural log of current year ordinary distributions (columns 1 and 2) or return of capital distributions (columns 3 and 4). $Indistributions_{t-1}$ is the natural log of prior year ordinary distributions or return of capital distributions. All other variables defined in previous tables. Regressions also include year indicator variables, but coefficients are not shown. Firm-clustered standard errors. P-values in parentheses. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.