Does the U.S. System of Taxation on Multinationals Advantage Foreign Acquirers?

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Abstract

The ability for deferral of home country taxation on multinationals' foreign earnings within the U.S. tax code creates an incentive for firms to avoid or delay repatriation of earnings to the U.S. Consistent with this incentive, prior research has documented a substantial lockout effect resulting from the current U.S. worldwide tax and financial reporting systems. We hypothesize and find that U.S. domiciled M&A target firms with more locked-out earnings are more likely to be acquired by foreigner acquirers, compared to domestic acquirers as a result of this tax advantage. The effect is economically significant; a standard deviation increase in our proxy for locked-out earnings is associated with a 14% relative increase in the likelihood that an acquirer is foreign. We also examine the impact of the home country tax system of the foreign acquirers. Because multinationals facing territorial tax systems are able to shift income to save taxes to a greater extent than firms domiciled in worldwide countries, the tax advantages for a foreign firm acquiring a U.S. target with locked-out earnings are potentially greater when the foreign firm operates under a territorial tax system. We find that foreign acquirers of U.S. target firms with locked-out earnings are more likely to be residents of countries that use territorial tax systems.

1. Introduction

Merger and acquisition activity plays an important and significant role in the global economy. Cross border mergers and acquisitions have been increasing over time and by 2007 accounted for almost half of all merger and acquisition activity (Erel et al. 2012). Various business and political leaders in the U.S. have expressed concerns over how the U.S. tax system potentially subsidizes and favors foreign takeovers (White 2014, Hatch 2014). In this study, we examine whether the system of worldwide tax system and related financial accounting rules utilized by the United States (U.S.) is associated with the likelihood that a U.S. target is acquired by a foreign buyer.

Countries tax the foreign earnings of multinational firms domiciled in their country in different ways. Prior research and organizations such as the Organization for Economic Cooperation and Development (OECD) generally classify these tax systems as either worldwide or territorial.[1] Under a worldwide tax system, the earnings of foreign subsidiaries are taxed in both the foreign jurisdiction where they are earned, and in the multinational's home country. The home country taxation at the parent level can often be deferred until the foreign earnings of the subsidiary are repatriated to the parent firm with a credit for foreign taxes paid. Under a territorial tax system, the earnings of foreign subsidiaries are taxed in the foreign jurisdiction where they are earned with little or no associated tax obligation to the parent firm's home country.

The U.S. taxes its multinational corporations on a worldwide basis. Within the U.S. tax system, taxes owing to the U.S. government on the earnings of foreign

[1] Worldwide tax systems are also referred to as "credit" systems as the parent usually receive a tax credit in the home country for the tax paid in a foreign jurisdiction. Territorial tax systems are also referred to as "exemption" systems as the parent firm is exempted (or partially exempted) from home country taxation of the profits of their foreign subsidiaries.

subsidiaries of U.S. domiciled multinational corporations are deferred until those earnings are repatriated back to the U.S. The allowance within the U.S. tax code for deferral of home country taxation on multinationals foreign earnings creates an incentive for firms to avoid or delay repatriation of earnings to the U.S. In this study we use the term "earnings lockout" or "locked-out earnings" to refer to the past earnings of U.S. multinationals' foreign subsidiaries that have not been repatriated to the U.S. as a result of the tax incentives to avoid/delay repatriation. Firms' locked-out earnings can be held in the form of cash (i.e., trapped cash) or other financial assets, or can be reinvested in the foreign subsidiary as operating assets. Prior research has documented that firms' repatriation decisions are sensitive to the level of repatriation taxes (Desai et al., 2001; Hines and Hubbard, 1990) and that the potential tax cost associated with repatriating foreign income is related to the magnitude of U.S. multinational cash holdings (Foley et al., 2007).

The U.S. financial accounting treatment for taxes on foreign earnings under Accounting Standard Codification section 740 (ASC 740) potentially exacerbates the lockout effect. ASC 740 allows multinational firms the option of designating foreign earnings as permanently reinvested abroad. If earnings are designated as permanently reinvested, firms can avoid the recognition in the current period of any U.S. tax expense related to foreign earnings for financial accounting purposes, thereby reporting lower total expenses and higher net income. The ability of U.S. multinationals to designate foreign earnings as permanently reinvested has the potential to increase the lockout effect of the U.S. worldwide tax system. Consistent with this notion, prior research has

documented a substantial lockout effect resulting from the current U.S. worldwide tax and financial reporting systems (Graham et al., 2010, 2011, Blouin et al., 2012).

If U.S. firms retain greater levels of foreign earnings overseas as a result of the U.S.'s worldwide tax system and the related financial reporting rules, these U.S. firms become more attractive targets for foreign buyers as the foreign buyers enjoy a tax-advantage resulting from the acquisitions. The tax-advantage is created by two primary factors. First, foreign acquirers have a tax-advantage related to the locked-out past earnings of the U.S. multinational targets. Through the merger or acquisition a foreign acquirer may be able to free the multinational's foreign subsidiaries' past earnings from the U.S. worldwide tax system by accessing those past earnings through "out-from-under" strategies. Second, the foreign acquirer can exploit an additional tax-advantage on a go forward basis. With appropriate tax planning, future foreign (e.g., non-U.S.) earnings of the new entity could avoid or lower U.S. repatriation taxes that would exist under the old corporate structure (see further discussion in section 3).

To test our first hypothesized relation between the residency of acquirers and earnings lockout in target firms we examine a comprehensive sample of 4,611 majority acquisitions of U.S. public company target firms from 1995 to 2010.[2] The sample includes all acquisitions valued over one million dollars of U.S. firms, both those with and without foreign operations, that have at least ten million dollars in total assets. The baseline likelihood of an acquirer of a U.S. corporation being foreign is 17% rising to 23% if the U.S. corporation has foreign earnings/operations. We measure earnings lockout using two main proxies. For our primary analysis, we hand collect the balance of

[2] We end our sample period in 2010 as this is the most recent year that we hand collected financial statement data on permanently reinvested earnings, our primary proxy for locked-out earnings.

permanently reinvested earnings (PRE) reported in the tax footnote of the financial statements. PRE is an accounting designation made by U.S. multinationals. A multinational firm designates foreign earnings as PRE when those earnings are indefinitely reinvested in a foreign jurisdiction. The designation of foreign earnings as PRE enables the multinational to avoid current period reporting of the eventual U.S. taxes on future repatriations of those earnings. Using a probit model, we observe a positive association between the reported level of PRE at a target firm and the probability that an acquirer is foreign. The effect is economically significant. A standard deviation increase in the level of PRE of a target firm is associated with a 2.3 percentage point increase in the likelihood that its acquirer is foreign. This relation is not likely explained simply by the extent of foreign activity across the target firms in our sample, as we control for the extent of foreign activity of the target firm by including various controls for the firm-specific level of foreign activity in our model.[3]

Next, we use an alternative measure of earnings lockout based on a firm's potential repatriation costs, as inferred from the previous three years' foreign earnings and taxes, based on Foley et al. (2007). Specifically, this measure is calculated as pre-tax foreign income multiplied by the U.S. corporate statutory tax rate less any current foreign tax expense, scaled by total assets. We again observe results consistent with an increased likelihood of a foreign firm acquiring U.S. target firms with locked-out earnings.

We also examine how the type of tax system utilized by a country impacts the likelihood that an acquirer of a U.S. target is from that country as the tax advantage

[3] Specifically, we include (i) an indicator variable set equal to one if the firm reports any nonzero value for foreign earnings or foreign taxes paid, (ii) the fraction of the firm's earnings that are foreign, and/or (iii), the firm's foreign sales scaled by total assets.

enjoyed by a foreign acquirer depends on the type of tax system the acquirer faces in their home country. As noted above, foreign profit tax systems of countries can be grouped into two broad categories: worldwide systems and territorial systems. Markle (2013) documents that multinational firms facing territorial tax systems shift more income than do multinational firms facing worldwide tax systems. Because multinationals facing territorial tax systems shift income to save taxes to a greater extent, the advantages for a foreign firm acquiring a U.S. target with locked-out earnings are potentially greater when the foreign acquirer operates under a territorial tax system. Following an acquisition of a U.S. target, foreign acquirers from territorial systems enjoy greater tax benefits and have greater incentives to shift profits out of the acquired U.S. parent and the old foreign subsidiaries of that U.S. parent in order to avoid U.S. taxation.[4] As a result, we hypothesize that foreign acquirers of U.S. target firms with locked-out earnings are more likely to be residents of countries that use territorial tax systems. This second hypothesis follows directly from our first hypothesis discussed above and has the added benefit of improving identification of our main hypothesized effect.

We test our second hypothesis a number of ways. First, we compare foreign acquisitions from territorial countries to U.S. acquisitions and, consistent with expectations, we observe a significant association between locked-out earnings and territorial foreign acquirers. Second, we compare foreign acquisitions from worldwide countries to U.S. acquisitions; in this falsification test, we do not observe a significant association between locked-out earnings and worldwide foreign acquirers. Third, we

[4] The incentives to acquire a U.S. target with locked-out earnings could still exist for a foreign acquirer in a worldwide country. If the statutory tax rate in the acquirer's country is lower than the U.S. statutory rate, the worldwide system foreign acquirer will still benefit from a tax advantage relative to a U.S. acquirer as the tax due upon repatriation will be applied at the lower rate.

compare foreign acquisitions from territorial countries to foreign acquisitions from worldwide countries. Although the sign on the coefficient is consistent with expectations, it is not significant at traditional levels, possibly due to low power. To increase power we next we compare foreign acquisitions from territorial countries to all acquisitions from worldwide countries (i.e., both U.S. and worldwide foreign acquirers). Consistent with expectations we observe a significant association between locked-out earnings and territorial acquirers.

In our final test of our second hypothesis, we exploit an exogenous change in the tax system for a subset of acquiring firms –those resident in countries that changed international tax systems during our sample period. Two major economies, the United Kingdom and Japan, both switched from worldwide tax systems to territorial tax systems during our sample period. This test allows stronger causal identification and we observe a significant association between locked-out earnings and foreign acquisitions occurring under the territorial (as opposed to worldwide) tax regime. Taken together, these test provide strong evidence consistent with the second hypothesis, that the association between the likelihood of an acquirer being foreign and a target's level of locked-out earnings is concentrated in acquiring firms located in territorial tax systems.

While not the focus of this study, the incentives to undergo a corporate inversion parallel the tax preferences for foreign firms to acquire U.S. targets. In an inversion, a corporation changes its residence from a high-tax location, such as the U.S., to a low-tax location. The transactions involved in an inversion vary but usually involve M&A and an exchange by shareholders of the U.S. corporation of their shares in the existing U.S. firm for shares of a firm (the new parent) located in a low tax location, usually employing a

territorial tax system. Given the data restrictions we impose, relatively few (if any) of the transactions in our sample are inversions.[5] Given the political scrutiny around inversions, commentators have noted the appeal of a foreign takeover as an alternative (Goldfarb 2014). Further, following the federal government's attempt to shut down inversions through regulatory changes in 2014, several companies that had already completed an inversion have done follow-on acquisitions of other U.S. targets (Mattioli 2014).

In this study, we present evidence consistent with the existence of a significant indirect cost of having a tax and financial reporting system that encourage multinational firms to retain earnings abroad, locking out those earnings from being reinvested domestically, or returned to shareholders. Our findings suggest that U.S. based potential acquirers for U.S. targets are losing out to foreign acquirers. In recent years, the issue of repatriation taxes and the relative merits of a territorial versus worldwide system of taxation have been publicly questioned and debated. Commentators have lobbied both for and against a reduction in U.S. repatriation taxes and legislators have proposed bills including repatriation tax holidays.[6] More directly related to this study, the House Committee on Ways and Means released a discussion draft on October 26, 2011, that would move the U.S. towards a territorial tax system by providing a deduction from

[5] First, we restrict our sample to acquisitions where the acquirer obtains at least 50% of the target. Second, of the acquisitions by foreign firms in our sample where we have data on the total assets of the acquirer, in only 5% of cases is the target larger than the acquirer. Additionally, 85% of the foreign acquisitions in our sample involve cash consideration. These features are less likely in inversions. Finally, we compare our sample to the inversions identified in Seida and Wempe (2004) and Desai and Hines (2002) and find little overlap.

[6] For an example of an argument in favor of reducing repatriation taxes, at least temporarily, see Drucker (2010). For an example of an argument opposed see the editorial in the October 30, 2011 edition of the Washington Post (Washington Post 2011). In 2011, three bills were introduced that included a repatriation tax holiday. Senators Wyden and Coats introduced the *Bipartisan Tax Fairness and Simplification Act of 2011,* Representatives Brady and Matheson introduced the *Freedom to Invest Act of 2011*, and Senators Hagan and McCain introduced the *Foreign Earnings and Reinvestment Act.*

income equal to 95% of foreign-source dividends received by U.S. parent companies (U.S. Government 2011). In other jurisdictions the issue has been debated and tax laws around the taxation of foreign subsidiary profits have been amended. Over the last decade a number of countries that had previously utilized a worldwide system for taxing foreign earnings have moved to a territorial system, most notably the United Kingdom and Japan, as of 2009. Our findings should be of interest and informative in the context of a decision to move to a territorial tax system as we document a consequence of worldwide international tax systems to U.S. firms.

The remainder of this paper is organized as follows. In Section 2, we discuss institutional background information on the taxation and financial accounting rules related to the foreign earnings of U.S. multinational firms. Section 3 motivates and develops the hypotheses. Section 4 details the sample selection and describes the research methodology design. Section 5 presents results and discusses the significance of our findings. Finally, Section 6 concludes.

2. Institutional Background and Prior Literature

2.1 U.S. Tax Treatment of Foreign Earnings

Broadly speaking, the U.S. uses a worldwide tax system. For a single legal entity, earnings are taxed immediately in the period earned, whether foreign or domestic. However, for a corporate group involving multiple entities, income earned at foreign subsidiaries is typically not taxed in the U.S. until those profits are repatriated to the U.S., which is referred to as "deferral." This U.S. domestic tax is reduced by foreign tax credits associated with foreign income taxes paid on foreign earnings. The actual calculation is complicated by the presence of foreign operations in multiple jurisdictions with different

statutory tax rates, but the residual tax due is approximately equal to any excess of the U.S. tax rate over the weighted average tax rate of the relevant foreign jurisdictions. Given the existence of deferral and the high corporate tax rate in the U.S. relative to most other countries, there is a potential policy concern that foreign investment by U.S. multinationals is inefficiently subsidized, so that firms are induced to reinvest their earnings abroad even when the potential returns are lower than those available domestically. This remains an area of current debate, however, as Desai et al. (2011) document that the flow of repatriated earnings has historically exceeded new foreign investment, and is not necessarily inefficient.

2.2 U.S. Accounting Treatment of Foreign Earnings

In principle, under U.S. Generally Accepted Accounting Principles, the expectation of a future U.S. tax payment associated with foreign earnings requires firms to record a deferred tax expense and the associated deferred tax liability. However, Accounting Standards Codification 740 allows an exception to this rule, called the Indefinite Reversal Exception, under certain circumstances. If management has the intent and ability to indefinitely reinvest the earnings of a foreign subsidiary, the permanently reinvested earnings, or "PRE", designation can be invoked, whereby the company can avoid recognizing the deferred tax expense. This designation must either be backed up by specific plans in terms of future financing and investment or else accompanied by an assertion that the earnings are intended to be distributed in a tax-free liquidation. The Financial Accounting Standards Board (FASB) revisited this exception in 2004, and decided to retain it due to the significant incremental complexity associated with the calculation of the relevant deferred tax liabilities. This complexity involves the

interaction of multiple tax jurisdictions with different tax rates and tax bases, the possibility of permanent or temporary tax holidays and the effects of fluctuating exchange rates, among other issues.

2.3 Prior Literature

The impact of U.S. tax and accounting treatment of foreign earnings is of paramount importance in understanding how a U.S. multinational makes its decisions on when and how to repatriate these earnings. Theoretical models such as those in Hartman (1985) and Scholes et al. (2014) show that when making this decision, the key consideration is the difference in after-tax rates of return, on the margin, in the foreign jurisdiction relative to what could be earned at home. Strikingly, in these simple models, the tax associated with repatriation itself is irrelevant, because at the time of the hypothetical decision, the foreign earnings are already "trapped" in the foreign jurisdiction, and so must eventually face the tax. This argument also implies that whether the multinational can benefit from deferral of this tax burden does not matter - the present value of taxes due remains the same whether paid immediately or in a future period. Of course, these results might not obtain in a richer model. Most importantly, if the repatriation tax is not constant over time, then a firm will want to time its repatriations for periods with particularly low tax rates; consequently, it may delay repatriation to wait for such a period, even if this comes at the cost of relatively lower after-tax foreign returns (see De Waegenaere and Sansing 2008). This delay results in a lock-out effect as discussed above, and is relevant to the current U.S. policy environment. The U.S. has addressed this issue in the past through a repatriation tax holiday enacted in the American Jobs Creation Act of 2004 which effectively lowered the U.S. tax rate on repatriations

during 2004 or 2005. In addition, there have been calls for another repatriation tax holiday and/or reform of the tax system for taxing multinationals. In recent years firms seem to have retained significantly higher foreign earnings in anticipation of a similar policy being enacted in the future (Brennan, 2010).

The tax-induced lock-out effect appears to be an important consequence of the U.S. international tax system. Additionally, the prevalence of the designation of foreign earnings as PRE and U.S. multinationals' desire to maintain higher book income by avoiding the deferred tax expense associated with unrepatriated foreign earnings reinforces the lock-out effect. This result arises because an actual repatriation would force the immediate recognition of the associated domestic tax expense, which in the case of PRE, by definition, had not already been recognized. In fact, Graham et al. (2011) find, based on a survey of 600 tax executives, that these two parallel effects are equally important in driving firms' initial foreign location and subsequent repatriation/reinvestment decisions.

This study contributes to the literature on cross border mergers and acquisitions. The majority of prior empirical studies examining cross-border acquisitions do not consider the effect of U.S. international tax rules on merger and acquisition decisions (e.g., Doukas and Travlos 1988; Moeller and Schlingemann 2005; Black et al. 2007; Dos Santos et al. 2008; Ellis et al. 2011; Erel et al. 2012). A notable exception is Huizinga and Voget (2009) who examine the impact of international cross-border double taxation on the parent-subsidiary structure of multinational firms created following cross-border mergers and acquisitions. They find that the likelihood of the new parent firm locating in a country following the cross-border takeover is reduced by high international double

taxation of foreign source income under that country's system; this means that countries with high international double taxation attract smaller numbers of parent firms, and the valuable headquarters activities that come with them. Huizinga and Voget (2009) take the firms and locations of the firms involved in a merger or acquisition as given. In this study, we extend this line of research by examining how the parties are paired up in the first place and document a positive relation between the likelihood of the acquirer being domiciled in a foreign country and locked-out earnings of the target.

In another stream of related research, Edwards et al. (2014) and Hanlon et al. (2014) examine the relation between U.S. tax rules and the outbound mergers and acquisitions by U.S. multinationals. These studies investigate the effect of cash trapped overseas on U.S. multinational corporations' foreign acquisitions and find that firms with high levels of trapped cash make less profitable acquisitions of foreign target firms using cash consideration. Our study differs from the Edwards et al. (2014) and Hanlon et al. (2014) studies in that it examines the impact of the U.S. tax system of foreign earnings on the merger and acquisitions of U.S. target firms whereas the aforementioned studies examine mergers and acquisitions of foreign targets by U.S. firms. Bird (2014) also investigates the relation between taxes and cross-border mergers and acquisitions by looking at the association between target firm characteristics and the tax status of acquirers. Specifically, he finds that low-tax foreign bidders are more likely to acquire more profitable target firms than are high-tax domestic bidders, and that exogenous increases in a target firm's tax shields lead to decreases in the probability of foreign acquisition. Our study differs from Bird (2014) in that he examines the impact of target profitability and existing tax deductions on inbound foreign merger and acquisition

activity; we examine the impact of the U.S. worldwide system of taxing foreign subsidiary profits on inbound mergers and acquisitions. Finally, Feld et al. (2014) examine the effect of the home country system of taxation (worldwide versus territorial) on outbound mergers and acquisitions. They find that a worldwide system disadvantages multinational firms when bidding for targets in low tax countries and reduces the volume of outbound mergers and acquisitions. Our study differs from Feld et al. (2014) as we examine the impact of the worldwide system of taxing multinationals on inbound mergers and acquisitions.

3. Hypothesis Development

3.1. Worldwide Taxation and Inbound Mergers and Acquisitions

Given that the worldwide tax system and related financial reporting rules lead U.S. firms to hold more earnings overseas, these firms can become attractive, that is, tax-favored, targets for foreign buyers. First, the past locked-out earnings of U.S. multinationals should be attractive to foreign acquirers because the takeover could help free the multinational's foreign subsidiaries' past earnings from the U.S. worldwide tax system. Following an acquisition by a foreign acquirer, it is possible for the acquirer to access the existing stock of unrepatriated foreign earnings in the foreign subsidiary. "Freeing" unrepatriated foreign earnings can be done through what are known as "out-from-under" or "hopscotching" transactions. Out-from-under planning is highly fact specific and different strategies are used depending on the attributes of the firms involved. Kleinbard (2014) presents an example of this type of transaction. A subsidiary with assets, such as cash, that the firm wishes to "free" can lend the assets to the foreign parent and "hop" over the U.S. The parent company is then able to use the assets as they wish

(invest in other assets, repay debt, distribute to shareholders, etc.). A similar transaction was possible prior to 2010 using an exchange of assets of the U.S. firm's foreign subsidiary for shares in the new foreign parent instead of a loan. The transfer could be treated as a dividend from the foreign subsidiary to the foreign parent to the extent of the existing earnings and profits. The dividend could avoid U.S. tax as it was from one foreign corporation (the subsidiary) to another foreign corporation (the new parent) and did not involve a U.S. entity.[7]

A second tax benefit to a foreign buyer of acquiring a U.S. multinational with locked-out earnings could occur on a go forward basis. The foreign acquirer could achieve this benefit through a reorganization so that the future foreign earnings of the pre-existing U.S. foreign subsidiaries are no longer subject to U.S. tax as the new parent firm is not domiciled in the U.S. For example, following an acquisition the acquiring foreign parent can "freeze" the value of the target foreign subsidiaries by exchanging the existing common stock of the subsidiaries held by the U.S. corporation for preferred shares of the subsidiaries while issuing new common shares to a related entity within the multinational that is domiciled outside of the U.S. Under this post-acquisition structure, the new combined entity could also benefit from additional tax savings. For example, the new foreign parent could lend to the U.S. subsidiary (the former U.S. based parent), thereby increasing interest deductions in the U.S.[8] The new structure could also allow for increased tax planning opportunities through transfer pricing, shifting profits out of the

[7] In 2010 this strategy was shut down following the creation of section 304(b)(5)(B). Following the enactment of section 304(b)(5)(B), the earnings and profits of the foreign subsidiary are excluded from the calculation and instead the earnings and profits of the U.S. target are used, generally reducing the tax benefits of the transaction.

[8] This is referred to as income stripping. Tax planning in this area needs to be structured to avoid triggering thin capitalization rules.

former U.S. based parent into a lower tax jurisdiction. Accordingly, we predict that firms with more locked-out earnings are more likely to be acquired by foreign firms because of their tax-favored status.[9] Stated formally, we propose the following hypothesis:

H1: The likelihood of an acquirer being foreign is increasing in a target's level of locked-out earnings.

3.2. The acquirer tax system

A discussed above, how countries tax the profits of foreign subsidiaries can be grouped into two broad categories: worldwide systems and territorial systems. While most large developed economies utilize territorial tax systems, some jurisdictions still use worldwide systems (e.g. for example as of 2010, 7 of the 34 OECD countries continue to use a worldwide system: the U.S., Chile, Greece, Ireland, Israel, Mexico and South Korea). Foreign bidders from countries under a territorial tax system may be able to free the acquired multinational's foreign subsidiaries' past and future earnings from the U.S. worldwide tax system and not face incremental parent country level tax on those earnings (as they would fall under the territorial regime). Foreign bidders from countries under a worldwide tax system could also have a tax advantage compared to U.S. bidders but only to the extent that the statutory rate in the foreign jurisidiction is lower than in the U.S. This is due to the fact that even if the foreign acquirer is able to repatriate past and future foreign subsidiary earnings around the U.S., those earnings will face repatriation taxes

[9] We examine the identity of the winning bidder rather than using bid premia because the latter faces several empirical difficulties. For example, we do not know what process determines acquisition prices, which is key to understanding how valuations feed into the observed price. We are also unable to observe the other bidders and bids for the target company, preventing us from directly examining how much more foreign bidders, compared to U.S. bidders, are willing to pay. That being said, our tests examining differences in the country of residence for different bidders will reveal valuation differences as long as the market for corporate control has some element of efficiency - the probability of a bidder winning must be increasing in its valuation.

under the new parent's worldwide regime. Alternatively stated, the tax advantages to acquiring a U.S. firm with locked-out earnings are likely greater for foreign acquirers from territorial countries, but the incentives to acquire a U.S. target with locked-out earnings could still exist for a foreign acquirer in a worldwide country.

In addition, multinational firms facing worldwide vs. territorial tax systems shift income to varying extents. Markle (2013) examines differences in the tax-motivated income shifting of firms facing worldwide versus territorial tax systems and documents that firms facing territorial tax systems shift more income than those facing worldwide tax systems. If firms facing territorial tax systems are able to shift income to a greater extent, the advantages for a foreign firm acquiring a U.S. target with locked-out earnings are greater when the foreign firm operates in a territorial tax system. Accordingly, we predict that foreign acquirers of U.S. target firms with locked-out earnings are more likely residents of countries that use territorial tax systems. Stated formally, we propose the following hypothesis:

> *H2: The association between the likelihood of an acquirer being foreign and a target's level of locked-out earnings is concentrated in acquiring firms located in territorial tax systems.*

The second hypothesis follows directly from hypothesis 1 and has the added benefit of improving identification of our main hypothesized effect. More specifically, in one of our tests of the second hypothesis we are able to exploit an exogenous change in the tax system faced by a subset of acquiring firms. Since we expect our hypothesized relation to exist primarily in settings where the foreign firms face a territorial system, the change from a worldwide to territorial system of a number of countries during our sample period provides much better causal identification and substantial comfort that our

hypothesized effect is driving differences in foreign versus domestic acquirers, as opposed to some other unobservable country specific effect.[10]

4. Research Design

4.1. Sample

To test our hypotheses, we examine acquisitions of publicly traded U.S. target firms. Focusing our analysis on target firms in one specific country has the added advantage of ensuring that all the sample mergers and acquisitions take place under a similar regulatory and institutional environment. The acquisition sample comes from Thomson SDC Platinum. We begin with all majority transactions (where the acquirer ends up with > 50% of the target) that involved a publicly-traded U.S. target from 1995 to 2010. For a transaction to be included in the sample, the target company must have nonmissing values of total assets (at), profits (ebitda), debt (dltt), and intangibles (intan) available in COMPUSTAT. We exclude all mergers and acquisitions that are valued at less than one million dollars and where the target firm had less than ten million dollars in total assets. We also exclude acquisitions by private equity and non-taxable entities as the hypothesized tax motivated effect should not impact these acquirers. Using this base sample, next we use a Python script to extract PRE disclosures from the most recent 10K filed by the target company prior to the deal and hand collect the firm's reported level of PRE. Appendix A provides a more complete discussion of the PRE data collection process. The above methodology yields a sample of 4,611 unique acquisitions.

4.2. Acquirer location and earnings lockout

[10] The United Kingdom and Japan both switched from worldwide tax systems to territorial tax systems during our sample period.

We examine the association between the probability of a U.S. target firm being acquired by a foreign firm versus a domestic firm and earnings lockout using the following probit model:[11]

$$Prob(ForeignAcq) = \beta_0 + \beta_1 LOCKOUT + \Sigma\beta_k Controls_k + \varepsilon \quad (1)$$

where *ForeignAcq* is an indicator variable equal to one if the acquirer was a foreign firm and zero otherwise. The residence of the acquirer is obtained from the Thomson SDC Platinum database. The independent variable of interest, *LOCKOUT*, is our proxy for the target firm's locked-out earnings. Defining and thus identifying exactly what earnings are locked out is debatable – one could argue that all unremitted foreign earnings are locked-out but this would obviously be an upper bound estimate. However, these data are not publicly available for all firms. As a result, we use three separate proxies; *PRE*, *PRE Indicator*, and *Repatriation Cost.* The first measure, *PRE*, is a measure of the reported permanently reinvested earnings of the firm calculated as the total dollar amount of PRE disclosed in the tax footnote scaled by total assets. *PRE* captures the cumulative amount of foreign earnings a target firm has declared it has or will indefinitely reinvest abroad and captures a subset of past foreign earnings. Graham et al. (2010) document that 75% of firms classify all their unremitted foreign earnings as PRE.

Ayers et al. (2014) document annual noncompliance with required PRE disclosures ranging from 10 percent to 17 percent for S&P 500 firms.[12] To address this concern we next create an indicator variable, *PRE Indicator*, set equal to one for any

[11] Standard errors are calculated using the Huber-White adjustment to account for heteroscedasticity.
[12] Ayers et al. (2014) identify "non-disclosers" using the effective tax rate reconciliation in the footnotes and note that over 85% of their "non-disclosers" provide an acknowledgement of the existence of some PRE.

positive value of PRE or a general disclosure of the existence of PRE without a specific dollar amount. Finally, in robustness tests we use a measure of repatriation tax costs based on Foley et al. (2007), *Repatriation Cost*, which is calculated using past foreign income and tax expense, rather than the hand collected financial statement PRE disclosures. Specifically, this measure is calculated as pre-tax foreign income multiplied by the U.S. corporate statutory tax rate less any foreign taxes paid, normalized by total assets. The prior three year average is used to compute these variables if it is available; if not, the prior two years; if not, the prior year.[13] The *Repatriation Cost* measure has several limitations. It is based on the assumptions that reported foreign earnings in the financial statements equate to foreign taxable income, and although intended as a cumulative measure, the incremental U.S. taxes due upon repatriation are calculated based on annual foreign income.

Our three *LOCKOUT* proxies, the two *PRE* based measures and the *Repatriation Cost* measure, are used to provide robustness to our results and triangulate our findings. The measures are not perfect substitutes. PRE is an accounting designation and should capture the cumulative earnings that management intends to keep aboard. *Repatriation Cost* is an estimate of the cost of repatriating foreign earnings based on recent years' reported data that should be correlated with the amount of earnings held abroad because of a lockout effect. Our proxies for locked-out earnings are measured based on past foreign earnings of the target firms. However, past profitability predicts future profitability and thus these measures also proxy for future profits and future tax benefits to foreign acquirers.

[13] If the prior year is missing, a zero is imputed to represent the lack of repatriation costs.

Following hypothesis 1, we expect a positive significant coefficient for β1, consistent with PRE/locked-out earnings helping explain which target firms in the U.S. market end up purchased by foreign as opposed to domestic acquirers. Note that to be included in the estimation sample for this test, the target firm must have been successfully taken over. In theory, we would expect a similar lockout effect to drive selection into the takeover sample as well – a firm which has a high level of locked-out earnings may not only be more likely to be acquired by a foreign firm, but could also be more likely to be taken over at all. We focus on the sample conditional on takeover in order to limit the hand collection of PRE data.[14]

The hypothesized relation between locked-out earnings and the domicile of acquirers should exist for all forms of locked-out earnings no matter in which form the underlying assets are held. The locked-out earnings could be held as financial assets (i.e., what is commonly referred to as "trapped cash") or reinvested in operating - non-financial - assets. Our hypothesis and tests are broader as we view the motivating factor in these acquisitions as the tax-favored treatment to foreign acquirers of both *past* and *future* foreign earnings lockout which latter arise from reinvestment of past locked out earnings in operating assets. While we do not examine a preference by foreign acquirers for tax-induced trapped cash specifically, our findings are consistent with this trapped cash story. Further, foreign cash holdings are not a required disclosure and until the SEC began requesting this information in recent years, few firms provided the public with this information. Even if the amount of foreign cash was disclosed, disentangling the amount

[14] Examining the selection of targets would require collecting PRE data for not just the sample firms actually acquired, but also all firm-year observations that did not result in an acquisition but would need to be included in the sample as possible targets.

that is trapped or tax induced would be difficult. Prior studies suggest that our *LOCKOUT* measures can also be interpreted as proxies for foreign cash and/or trapped cash. For example Harford et al. (2014) document a correlation of 0.81 between PRE and foreign cash in a sample of 657 firm-years with disclosure of foreign cash holdings. Hanlon et al. (2014) estimate tax-induced foreign cash (their variable *Predicted Foreign Cash-REPAT*) using the estimated coefficient on the Foley et al. repatriation tax cost variable from a regression of foreign cash on the repatriation tax cost measure and controls. Multiplying our *Repatriation Cost* measure by their estimated coefficient, 45.29, could be interpreted as tax-induced foreign cash holdings.[15] Inferences from our regression results would remain the same as this transformation would simply be multiplying all our observations by a constant.

The clearest alternative hypothesis to hypothesis 1 would be a direct preference by foreign acquirers for U.S. target firms with foreign activities; that is, a foreign acquirer could prefer a U.S. target firm with locked-out earnings simply because the target firm, like the acquirer, also operates outside of the U.S. As a result, it is important to control for the foreign activities of the target firms. Because of the difficulty in measuring U.S. multinationals' foreign activity using publicly available data, we attempt to accomplish this in two different ways (Donohoe, McGill, and Outslay 2012). First, we include a control variable that is an indicator variable equal to one when the target firm has any foreign earnings and zero otherwise. We also include an additional control variable for the fraction of total earnings that are foreign. Second, alternatively we include a control

[15] This coefficient is from column 1 of Table B1 in Hanlon et al. (2014).

variable for the total foreign sales of the target, from the Compustat segment data, relative to total assets of the target firm.

In addition to the control variables designed to capture the extent of foreign operations of the U.S. target firms, we include control variables for measures of target profitability (earnings before interest, taxes, depreciation and amortization) scaled by total assets, intangible assets scaled by total assets, and leverage (debt over total assets). The inclusion of the first two of these variables controls for the fact that foreign and domestic acquirers could have differential access to income shifting strategies, which themselves are more valuable if the target firm has more profits to shift, and potentially easier to implement if the target has more intangible assets. We control for target firm leverage as the capital structure of the firm could be used in order to decrease/increase reported taxable income in a specific jurisdiction using interest payments. In addition, we include a control variable for net operating loss carryforwards relative to total assets, as well as an indicator variable for current period losses, since these reflect differences in future tax rates faced by the target firms that could affect foreign and domestic takeovers in different ways, given different home country tax rates and business strategies.[16]

A number of the control variables can also be interpreted as proxies for the future taxable profits of the target firm overall, and of the foreign subsidiaries of the target in particular. The control variables for "foreign-ness," profitability, and intangibility will

[16] We do not explicitly control for, or test for differences in, the type of consideration given as payment. Prior research has documented substantial cross border differences in consideration. For example, Faccio and Masulis (2005) document most European M&A is financed with cash (80% pure cash plus 8% partially cash) with country variation from 100% in Austria to 66% in Finland. Conversely, Andrade et al. (2001) document that 70% (58%) of M&A by U.S. firms involve stock (all stock). Faccio and Masulis (2005) document that these differences are driven by numerous factors, including a higher propensity for firms to use cash in cross-border acquisitions. In untabulated tests we control for consideration type; inferences remain similar.

also capture the tax-favored effect of future profits and positive coefficients on these variables would also be consistent with foreign acquirers being tax-favored acquirers.

4.3. Acquirer location, tax system, and earnings lockout

The main test of the second hypothesis involves distinguishing the foreign acquirers in the sample by whether they are located in a country that uses a worldwide or a territorial system. If the second hypothesis is descriptive, the increased propensity to acquire firms with locked-out earnings by foreign over domestic firms should be greater when the foreign component of the acquirer sample consists of territorial tax system country acquirers as opposed to when it is made up of worldwide tax system country acquirers. To test hypothesis 2, we rerun the analysis from subsection 4.2 on four separate subsamples of acquisitions. In the first subsample, we include all domestic acquisitions and only those foreign acquisitions that are made by acquirers from territorial countries. In the second subsample, we include all domestic acquisitions and only those foreign acquisitions that are made by acquirers from worldwide countries. In the third subsample, we include only acquisitions by foreign firms and code the dependant variable as one when the acquirer is from a territorial country, and zero if from a worldwide country. Finally, in the fourth subsample, we include acquisitions from territorial countries coded as one and include both U.S. domestic acquisitions and foreign acquisitions from worldwide countries in the zero group. Consistent with hypothesis 2, the association between the likelihood of an acquirer being foreign and a target's level of locked-out earnings is concentrated in acquiring firms located in territorial countries, we expect positive significant coefficients on the measure of earnings lockout for the first, third, and fourth specification. A coefficient on the measure of earnings lockout not

statistically different from zero is expected in the second specification because all acquirers are from worldwide tax systems, thus these foreign acquirers are not expected to be tax-favored over U.S. domestic acquirers except to the extent that the foreign corporate statutory tax rate is much lower than the U.S. corporate statutory tax rate.

A remaining empirical concern with these tests is that acquirers from some countries could have a particular preference for U.S. target firms with locked-out earnings, either for correlated non-tax reasons, or because other features of their tax codes could facilitate accessing the foreign earnings of the target firm at a lower tax cost. To account for this possibility, in the final set of tests, we include acquirer country fixed effects in the regression models. For many of the acquirer countries in the sample, these fixed effects would be perfectly predictive of territorial or worldwide tax systems, as many countries did not change their systems of international taxation over the course of the sample period. As a result, in fixed effects models we only include acquisitions in our sample from acquirers located in countries that satisfy two criteria. First, during our sample period the country must have switched tax systems from a worldwide system to a territorial system, or vice versa. Second, at least one firm from the acquiring country must have made an acquisition during the sample period before the reform and at least one firm from that country must have made an acquisition following the reform.[17]

The resulting sample consists primarily of acquisitions by acquiring firms located in the United Kingdom and Japan, which both switched from a worldwide to a territorial

[17] A logical potential alternative research design would be to implement a difference-in-difference test with the foreign indicator variable as the dependent variable and the territorial indicator as the test variable on the right hand side of the equation. However, this research design is not feasible as the territorial indicator would be perfectly collinear with the dependent foreign indicator. Some other alternative difference-in-difference research designs, such as comparing acquisitions by foreign acquirers in countries that switched tax systems of both U.S. targets and *non-U.S.* targets before and after the switch are also not feasible as our test variables, *LOCKOUT*, will only be non-zero for the U.S. targets.

system in 2008. A positive coefficient on the lockout variable in this sample would be consistent with the preference of foreign acquirers from a particular country for targets with locked-out earnings increasing after a switch from a worldwide system of taxation to a territorial system. This tax system switching empirical strategy reduces concerns that the results observed in the earlier tests are being driven by fixed country-specific variables and allows better causal identification.

5. Empirical Findings

5.1. Descriptive Statistics

The sample includes 4,611 unique acquisitions, of which 791 have positive values of PRE. There are 3,812 deals with domestic acquirers (15% have PRE with a median value of $37 million, or 4.7% of target firm assets) and 799 deals with foreign acquirers (24% have PRE with median value of $38 million, or 5.3% of target assets).[18] In an additional test, we use an alternative measure of earnings lock-out based on a firm's potential repatriation costs, as inferred from previous years' foreign earnings and taxes paid based on Foley et al. (2007). Using this alternative proxy in lieu of the hand collected PRE data yields a sample of 5,243 unique acquisitions.

Table 1 panel A provides details of the sample composition. The number of acquisitions per year is relatively constant, with a small peak in activity around the turn of the century and a valley in activity during the financial crisis of the late 2000's. The annual percentage of acquisitions by foreign acquirers ranges from 10 percent to 27 percent with a peak around the financial crisis. Table 1 panel B provides a breakdown of the acquisitions by country of the acquirer. No single country accounts for more than 20

[18] Of those 2 groups, 151 and 50 targets, respectively, have some PRE but do not report a specific amount.

percent of the acquisitions. Acquirers from the major western economies of the United Kingdom, Canada, France, and Germany account for just over half of the foreign observations.

In untabulated analysis we examine a number of additional characteristics of the acquisitions. For transactions where the acquirer's industry is known, a similar portion of domestic and cross-border transactions involve a target and acquirer within the same industry. More specifically, for both cross-border and domestic acquisitions both parties involved in the transaction are within the same 1-digit NAICS industry in 74 percent of transactions. When industry is measured using 2-digit NAICS, 62 percent of domestic transactions and 63 percent of cross-border transactions involve parties within the same industry. These data provide some comfort that our findings are not driven by differences in the desire to diversify for foreign versus domestic acquirers. We also observe that targets of both foreign and domestic acquirers have similar asset tangibility (mean of 22 percent for targets of domestic acquirers and 23 percent for targets of foreign acquirers).[19] Targets of both groups also have similar cash holdings. Cash and cash equivalents account for 17 percent of assets in the targets of domestic acquirers and 18 percent of assets in the targets of foreign acquirers. These data provide further comfort that the targets of domestic and foreign acquirers are similar in non-tax attributes.

Table 2 panel A provides summary statistics for the PRE and tax cost of repatriation earnings lockout measures as well as the control variables. Appendix B provides detailed variable definitions for the test variables and controls. All continuous variables are winsorized at the 1% and 99% levels to reduce the influence of outliers. The

[19] Where asset tangibility is defined as net property, plant, and equipment over total assets.

descriptive statistics indicate that acquirers are foreign for 17% of the deals in our sample and 16% of target firms report positive values of PRE. Approximately a third of target firms have foreign activities (that is foreign earnings) and firms on average report 10% of their earnings as coming from foreign sources.

Table 2 panel B provides a matrix of the sample by acquirer type (foreign or domestic) and target type (domestic operations only or multinational). Foreigners acquire 477 domestic only firms, 14 percent of the 3,529 targets that have only U.S. domestic operations. Foreigners acquire 399 multinationals, 23 percent of the 1,714 targets that are U.S. based multinationals: a substantially larger percentage of the multinational acquisitions than the domestic only acquisitions, consistent with a preference of foreign firms for U.S. targets with foreign operations. A chi-squared test for independence is highly significant (p-value <0.001).

Table 2 panel C provides the correlations of our test and control variables. One notable observation from this table is the strong positive correlation between the proxies for earnings lockout. Both of the PRE measures and also the tax repatriation cost variable are highly correlated, ranging from 0.236 to 0.699, providing some comfort that they are capturing the same underlying construct of earnings lockout. The correlations between the measures of earnings lockout and the indicator for acquirers being located in a foreign jurisdiction are positive and significant and provide suggestive evidence for our first hypothesis. It is also of note that our three different measures of the target firm's foreign activities: the foreign earnings fraction, the indicator variable for any foreign earnings or taxes, and the amount of foreign sales relative to total assets, are also each positively correlated with the probability that the acquirer will be foreign. This highlights the

importance of controlling for the extent of foreign activities in order to disentangle the effect of locked-out foreign earnings from foreign activities of the target firm in general.

5.2. Acquirer location and earnings lockout

Table 3 presents the results of estimating equation (1) where the target firm's level of PRE divided by total assets is used as the measure of locked-out earnings. The estimated marginal effect of this measure is 0.581 (standard error of 0.136) and is statistically significant at the 1% level. This effect corresponds to an increase in the probability that the acquirer will be foreign of 0.581 percentage points for a one percentage point increase in the *PRE* measure, or a 2.3 percentage point increase for a one standard deviation increase in the measure. This effect size can be compared to the average foreign acquirer probability in the sample of 17% and represents a 14% (2.3%/17%) relative increase in the likelihood that the acquirer is foreign.

The estimated marginal effects for the control variables in column 1, when significant, are generally consistent with expectations. Profitability loads positively, consistent with foreign acquirers placing a higher value on pre-tax earnings due to their potential tax savings on future profits. The intangibility ratio loads positively, consistent with the notion that more intangible assets make income shifting less costly and more tax advantageous to foreign acquirers. Somewhat surprisingly the loss indicator loads positively. Bird (2014) documents a similar preference by foreign acquirers for loss firms and attributes the result to a non-tax preference. He documents the preference for loss firms exists in minority transactions as well, a setting where the acquirer is unlikely to be able to exert influence on the target to extract tax benefits.

In column 2 of Table 3, we add the first set of control variables for the "foreign-ness" of the target firm, an indicator variable equal to one for any foreign earnings, and the fraction of target firm earnings that are foreign, to the probit model. The marginal effect declines to 0.357 (standard error of 0.157) but remains statistically significant. The fact that the effect declines after adding controls for foreign activity, combined with the positive marginal effect estimated for these variables, suggests that foreign acquirers do in fact prefer target firms with more foreign activities, and that this preference explains about half of the effect of PRE seen in the first column. In column 3, we use an alternative variable to control for foreignness. We include a variable measuring the level of foreign sales relative to total assets of the target firm. This change yields a marginal effect of the *PRE* measure of 0.280 (standard error of 0.154), which is significant at the 10% level. The positive and significant coefficients on some of the "foreign-ness," profitability, and intangibility control variables is also consistent with foreign acquirers being tax-favored acquirers because these variables also will capture the tax-favored benefits of future profits. Foreign acquirers could realize additional tax benefits related to future profits by rerouting future profits around the U.S. through a reorganization or shifting future income using transfer pricing and income stripping via loans to the U.S. subsidiary from the foreign parent company.

Table 4 reports results using *PRE Indicator*, an indicator variable equal to one for any positive value of PRE as the measure of locked-out earnings, and investigate the same three specifications, observing similar results and inferences. In particular, in the specification in column 1 that includes the primary set of control variables, we observe an estimated marginal effect of 0.093 (standard error of 0.018), which is significant at the 1%

level. This estimate corresponds to a 9.3 percentage point increase in the probability that the acquirer will be foreign for a target that has any PRE, relative to a target that does not. The effect of the PRE indicator variable declines to 4.4 percentage points when the first set of foreign activity control variables is included in the model, but is still significant at the 5% level. Using the alternative control variable, the total target foreign sales scaled by target total assets, for foreign activity yields a slightly larger effect on the PRE indicator with a similar standard error and significance level.

In Table 5 we repeat this analysis using *Repatriation Cost*, the repatriation tax cost measure based on past foreign income and tax expenses, rather than the hand collected financial statement PRE disclosures. Across the three main specifications, we observe similar results. These results provide reassuring evidence that the results obtained using the PRE based measures are indeed capturing meaningful tax-related lockout effects. Specifically, for the sample with the primary control variables, the estimated marginal effect of the repatriation cost variable is 0.021 (standard error of 0.007) and is significant at the 1% level. This corresponds to a 1.4 percentage point higher likelihood of the acquirer being foreign for a one standard deviation increase in the repatriation cost variable. When adding the first two control variables for the foreign activities of the target, the effect declines to 0.012 (standard error of 0.007), which is significant at the 10% level. In column 3, controlling for foreign activity using the level of foreign sales yields similar results.

5.3. Acquirer location, tax system, and earnings lockout

As discussed in section 4, we investigate hypothesis 2 by splitting the sample used in the above tests depending on whether the acquirer, if foreign, is resident in a country

that employs a territorial or a worldwide tax system. For parsimony here, we report results measuring earnings lockout using PRE scaled by total assets. Results using the PRE indicator and repatriation cost measure are broadly consistent and result in similar inferences.

In the first two columns of Table 6 we analyse two different subsamples. In the first column, observations with domestic acquirers and only foreign acquirers from territorial countries are included. In the second column, observations with domestic acquirers are again included but are instead compared to acquisitions made by only foreign acquirers from worldwide tax system countries. This is a falsification test. As articulated in hypothesis 2, the tax advantage to foreign acquirers will primarily exist for foreign acquirers that are located in countries that utilize territorial tax systems. The tax advantage to foreign acquirers facing worldwide tax systems will be lower as any freed past profits, as well as future profits, will face eventual home country taxation as a result of the worldwide system. As a result, we do not expect to observe a significant coefficient on *LOCKOUT* in column 2. Consistent with hypothesis 2, the effect of the PRE measures is positive and statistically significant at the 5% level for the foreign territorial vs. domestic comparison and not significantly different from zero for the foreign worldwide vs. domestic comparison. These findings imply that the results from the foreign vs. domestic models used to test hypothesis 1 are driven primarily by the acquisitions by firms resident in territorial tax system countries. Note that the control variables load similarly across both subsamples, implying that both types of foreign acquirers have similar non-tax preferences over target characteristics. This evidence is suggestive of our hypothesized relation.

In column 3 of Table 6, we remove domestic acquisitions of U.S. firms from the sample, and redefine the dependent variable to be one if the foreign acquirer comes from a territorial country and zero if it comes from a worldwide country. If the hypothesized tax mechanism is driving the above results, we would expect to see positive sorting of territorial country acquirers towards targets with high levels of PRE. We observe a positive marginal effect, though due to large standard errors, the effect is not statistically significant at traditional levels. With the relatively small number of foreign acquirers in the sample, the test could lack the statistical power to identify a differential effect between territorial and worldwide systems in this particular specification.

Domestic acquisitions are fundamentally similar to acquisitions originating from worldwide countries as both the U.S. and these foreign acquirers share the same kind of worldwide tax system. We exploit this similarity and implement an alternative approach to testing the territorial versus worldwide tax system distinction by including domestic acquisitions with the foreign worldwide acquirers in the worldwide system category. A desirable feature of this approach is the direct comparability with the earlier findings since this specification remains a two alternative empirical model.[20] In addition, this methodology greatly increases the sample size and power of the test.

The results observed from this empirical specification are presented in column 4. The estimated effect of the PRE measure suggests a clear difference between acquirers from worldwide and territorial tax systems in the hypothesized direction. In particular, the marginal effect is 0.316 (standard error of 0.126), which is significant at the 5% level.

[20] Estimating multinomial logit models, with domestic, foreign credit and foreign exemption as the three possible options yields substantially similar results – marginal effects are in the predicted direction, but fall short of statistical significance at traditional levels.

The observed effect corresponds to an increase in the probability of a territorial, relative to a worldwide, acquirer of 1.3 percentage points for a one standard deviation increase in the level of PRE relative to total assets. This effect size can be compared with the average likelihood of a territorial acquirer of 11%. Overall, the results in Table 6 provide evidence consistent with hypothesis 2. Acquirers resident in territorial country exhibit a stronger preference for U.S. target firms with locked-out earnings than acquirers from worldwide tax system countries (including domestic acquirers).

In Table 7, the sample is again restricted to only acquisitions by foreign firms to investigate whether the sorting evident in the above results can be explained by other differences across foreign countries that are correlated with the type of international tax system in use. As a baseline, column 1 presents the results from estimating the same models as in Table 6 for the sample of countries that switched their international tax system from a worldwide to territorial system during the sample period (Japan, UK, and New Zealand in 2009; Italy and Finland in 2004). The dependent variable is coded 1 (0) for acquisitions occurring after (before) the switch to territorial from worldwide in the foreign acquirers country. The regression yields evidence consistent with the second hypothesis, as the loading on PRE is positive and significant. As above, this implies that territorial country acquirers are more likely to be the acquirer of U.S. target firms with high levels of locked-out earnings or targets with any locked-out earnings at all.

In column 2 of Table 7, country fixed effects are added for each of the five acquirer countries in the tax system switching sample. The loading on PRE relative to total assets falls from 1.312 to 0.960 but remains significant at the 1% level. This result is suggestive of an unobserved, time constant variable that explains both a country's having

a territorial tax system as well as having acquirers that prefer target firms with locked-out earnings. However, this omitted variable does not completely explain the previously observed results. When a country switches from a worldwide tax system to a territorial system, its acquirers increase their preference for targets with PRE, which is consistent with tax differences across acquirers as the mechanism underlying the sorting hypothesized and identified in the earlier tests and not just a preference by foreign firms for acquiring foreign or U.S. domestic assets of the US multinationals. That is, the results in Table 7 provide strong evidence of a causal association between the tax benefits of locked out earnings to foreign acquirers from territorial tax systems.

6. Conclusion

In this study, we document a significant indirect cost of having both tax and financial reporting systems that encourage multinational firms to retain earnings abroad, locking out those earnings from being reinvested domestically, or returned to shareholders. Our findings, based on variation in locked-out earnings across U.S. target firms, suggest that U.S. based potential acquirers for U.S. targets are losing out to foreign acquirers who are tax-favored. This result is confirmed in cross-sectional tests. We exploit the fact that some foreign acquirers are resident in countries with a territorial system and others with a worldwide system as an additional source of identification and document that the increased propensity of an acquirer to be foreign is concentrated in territorial systems. We also examine country specific changes in worldwide versus territorial international tax systems and document that the relative preference of foreign acquirers for locked-out earnings holds even using a within-country specification.

The findings of this study should be informative in the context of a discussion of the relative merits of territorial versus worldwide systems of taxation. This issue has been publicly debated in several other jurisdictions and tax laws around the taxation of foreign subsidiary profits have been changed in recent years. Most notably the United Kingdom and Japan have both abolished their worldwide tax systems and have adopted territorial systems. Our findings should be of interest and informative in the context of the current debate over the taxation of the foreign profits of U.S. multinationals in that U.S. firms are tax-disfavored acquirers of U.S. multinational firms with locked out earnings. The findings of this study are also informative in the current debate over corporate inversions. If Congress or the administration introduce additional tax law changes targeted specifically at inversions, U.S. firms will continue to be attractive targets to foreign acquirers, especially those from territorial systems. Legislation that only targets inversions will not stop tax-favored foreign acquisitions of U.S. multinational firms. A broader overhaul of the U.S. corporate tax system, such as a territorial system with lower statutory tax rates, would be needed to remove the tax favored status of foreign acquirers.

Appendix A – Data Collection Methodology

PRE data were collected from financial statements using the following methodology:

Step 1 We identified all mergers and acquisitions of U.S. targets during the period from 1995 to 2010 in the SDC database with Compustat data and a 10K available through EDGAR.[21]

Step 2 A computerized search of all the 10Ks of acquired firms was performed to determine if the acquired firm had PRE.

The following terms (presented alphabetically) were used in a python script to identify PRE balances reported in the 10K. The search was performed as to allow for different types of whitespace or hyphenation in the terms:

accumulated earnings of foreign subsid
earnings indefinite
estimate the amount of additional income tax
estimate the amount of additional tax
foreign subsidiaries have accumulated
indefinitely invest
indefinitely reinvest
indefinitely reinvested
permanently reinvested
reinvest indefinite
reinvested for an indefinite period
reinvested indefinitely
reinvested permanently
repatriate
retained indefinitely
undistributed earnings
undistributed foreign earnings
unremitted earnings
unremitted foreign earnings

Step 3 If none of these terms appeared in the 10K, PRE was set equal to zero. If any of these terms appeared, the surrounding text was extracted and the PRE balance was hand collected.

[21] Matching done by CIK

Appendix B – Variable Definitions

Foreign Acquirer Indicator	An indicator variable set equal to one if the parent of the acquirer is not a U.S. resident; equal to zero otherwise.
Territorial Acquirer Indicator	An indicator variable set equal to one if the parent of the acquirer is located in a country with a territorial tax system; equal to zero otherwise.
PRE	Stock of permanently reinvested earnings collected from tax footnote, scaled by total assets (AT_t).
PRE Indicator	An indicator variable set equal to one if any positive value of permanently reinvested earnings is disclosed in the tax footnote or the firm provides a general disclosure of the existence of PRE without a specific dollar amount; equal to zero otherwise.
Repatriation Cost	Pre-tax foreign income ($PIFO_t$) multiplied by the U.S. statutory corporate tax rate (35%) less any foreign taxes ($TXFO_t$), scaled by total assets (AT_t). The three year average is used to compute these variables if it is available; if not, the two year measure; then the one year measure; if all of these are missing, a zero is imputed to represent the lack of any repatriation cost. This variable is multiplied by 100 for ease of interpretation.
Foreign Earnings Fraction	Pre-tax foreign earnings ($PIFO_t$) divided by total pre-tax earnings (PI_t). Values are restricted to a minimum (maximum) of zero (one).
Any Foreign Earnings Indicator	An indicator variable set equal to one if foreign earnings ($PIFO_t$) are nonzero or foreign taxes ($TXFO_t$) are nonzero; equal to zero otherwise.
Foreign Sales	Equal to foreign sales from Compustat segment data (the sum of SALES for each nondomestic geographic segment), scaled by total assets (AT_t).
NOL Carryforwards	Tax loss carryforwards ($TLCF_t$), scaled by total assets (AT_t).
Loss Indicator	An indicator variable set equal to one if earnings before interest, taxes, depreciation and amortization ($EBITDA_t$) is negative; equal to zero otherwise.
Profitability	Earnings before interest, taxes, depreciation and amortization ($EBITDA_t$), scaled by total assets (AT_t)
Log Total Assets	Logarithm of total assets (AT_t).

Intangibles	Intangible assets ($INTAN_t$), scaled by total assets (AT_t).
Leverage	Total long term debt ($DLTT_t$), scaled by total assets (AT_t).

References

Andrade, G., M. Mitchell, and E. Stafford. 2001. New evidence and perspectives on mergers. Journal of Economic Perspective. 15(2): 103-120.

Ayers, B., C. Schwab, and S. Utke. 2014. Noncompliance with mandatory disclosure requirements: the magnitude and determinants of undisclosed permanently reinvested earnings. The Accounting Review. Forthcoming.

Bird, A. 2014. The effects of taxes on the market for corporate control. Carnegie Mellon University working paper.

Black, E., T. Carnes, T. Jandik, and B. Henderson. 2007. The relevance of target accounting quality to the long-term success of cross-border mergers. Journal of Business Finance & Accounting 34(1-2): 139-168.

Blouin, J., L. Krull, and L. Robinsion. 2012. Is U.S. multinational intra-firm dividend policy influenced by capital market incentives? The Accounting Review. 87(5): 1-29.

Blouin, J., L. Krull, and L. Robinsion. 2013. The location, composition, and investment implications of permanently reinvested earnings. University of Pennsylvania, University of Oregon, and Dartmouth College working paper.

Brennan, T. 2010. What happens after a holiday? Long-term effects of the repatriation provision of the AJCA. Northwestern Journal of Law and Social Policy. 5: 1-18.

De Waegenaere, A. and R. Sansing. 2008. Taxation of international investment and accounting valuation. Contemporary Accounting Research. 25(4): 1045-1066.

Desai, M., and J. Hines. 2002. Expectations and expatriations: Tracing the causes and consequences of corporate inversions. National Tax Journal. 55(3): 409-440.

Desai, M., C. Foley, and J. Hines. 2011. Tax policy and the efficiency of U.S. direct investment abroad. National Tax Journal. 64(4): 1055-1082.

Donohoe, M., G. McGill, and E. Outslay. 2012. Through a glass darkly: what can we learn about a U.S. multinational corporation's international operations from its financial statement disclosures? National Tax Journal. 65(4): 961-984.

Dos Santos, M., V. Errunza, and D. Miller. 2008. Does corporate international diversification destroy value? Evidence from cross-border mergers and acquisitions. Journal of Banking and Finance 32: 2716-2724.

Doukas, J., and N. Travlos. 1988. The effect of corporate multinationalism on shareholders' wealth: Evidence from international acquisitions. The Journal of Finance 43(5): 1161-1175.

Drucker, J. 2010. Dodging repatriation tax lets U.S. companies bring home cash. Bloomberg.com December 29, 2010. Available at http://www.bloomberg.com/news/2010-12-29/dodging-repatriation-tax-lets-u-s-companies-bring-home-cash.html.

Edwards, A., T. Kravet, and R. Wilson. 2014. Trapped cash and the profitability of foreign acquisitions. Forthcoming Contemporary Accounting Research.

Ellis, J. S. Moeller, F. Schlingemann, and R. Stulz. 2011. Globalization, governance, and the returns to cross-border acquisitions. University of Pittsburgh and The Ohio State University working paper.

Erel, I., R. Liao, and M. Weisbach. 2012. Determinants of cross-border mergers and acquisitions. Journal of Finance 67(3): 1045-1082.

Faccio, M. and R. Masulis. 2005. The choice of payment method in European mergers and acquisitions. Journal of Finance 60(3): 1345- 1388.

Feld., L., M. Ruf, U. Scheuering, U. Schreiber, and J. Voget. 2014. Effects of territorial and worldwide corporation tax systems on outbound M&As. Walter Euchken Institute working paper.

Financial Accounting Standards Board. Accounting Standards Codification 740 – Income Taxes. Norwalk, CT.

Foley, F., J. Hartzell, S. Titman, and G. Twite. 2007. Why do firms hold so much cash? A tax-based explanation. Journal of Financial Economics, 86: 579-607.

Goldfarb, J. 2014 A tax inversion in all but name. The New York Times. August 8, 2014.

Graham, J., M. Hanlon, and T. Shevlin. 2010. Barriers to mobility: the lockout effect of U.S. taxation of worldwide corporate profits. National Tax Journal. 63(2): 1111-1144.

Graham, J., M. Hanlon, and T. Shevlin. 2011. Real effects of accounting rules: Evidence from Multinational Firms' Investment Location and Profit Repatriation Decisions. Journal of Accounting Research, 49(1): 137–185.

Hatch, O. 2014. How to deal with corporate inversions – without the politics. The Washington Post. August 7, 2014.

Hanlon, M., R. Lester, and R. Verdi. 2014. The effect of repatriation tax costs on U.S. multinational investment. Forthcoming Journal of Financial Economics.

Harford, J., C. Wang, and K. Zhang. 2014. Foreign cash: Taxes, internal capital markets and agency problems. University of Washington working paper.

Hartman, D. 1985. Tax policy and foreign direct investment. Journal of Public Economics. 26(1):107-121.

Huizinga, H. and J. Voget. 2009. International taxation and the direction and volume of cross-border M&As. The Journal of Finance. 64(3): 1217-1249.

Kleinbard, E. 2014. "Competitiveness" has nothing to do with it. Forthcoming Tax Notes.

Markle, K. 2013. Shift happens: A comparison of the tax-motivated income shifting of multinationals in territorial and worldwide countries. University of Waterloo working paper.

Mattioli, D. 2014. Tax-inversion players swoop in for seconds. Wall Street Journal. October 9, 2014.

Moeller, S.B., and F.P. Schlingemann. 2005. Global diversification and bidder gains: A comparison between cross-border and domestic acquisitions. Journal of Banking and Finance. 29: 533-564.

Scholes, M., M. Wolfson, M. Erickson, M. Hanlon, E. Maydew, and T. Shevlin. 2014. Taxes and Business Strategy A Planning Approach. Upper Saddle River, NJ: Prentice Hall.

Seida, J. and W. Wempe. 2004. Effective tax rate changes and earnings stripping following corporate inversion. National Tax Journal. 57(4): 805-828.

United States Government. 2011. Ways and Means Discussion Draft. Partial Exemption (Territorial) System. October 26, 2011.

Washington Post. 2011. No time for a corporate tax 'holiday.' October 30, 2011.

White, M. 2014. Ignoring the facts on corporate inversions. Wall Street Journal. July 18, 2014.

Table 1: Sample Composition
Panel A: The number of acquisitions, and type of acquirer, by year

Year	Total Acquisitions	Portion of Sample in Year	Domestic Acquirer	Foreign Acquirer	Percentage Foreign
1995	371	7%	332	39	11%
1996	371	7%	334	37	10%
1997	472	9%	414	58	12%
1998	517	10%	441	76	15%
1999	542	10%	433	109	20%
2000	488	9%	386	102	21%
2001	389	7%	323	66	17%
2002	265	5%	228	37	14%
2003	283	5%	253	30	11%
2004	239	5%	207	32	13%
2005	245	5%	198	47	19%
2006	239	5%	188	51	21%
2007	259	5%	188	71	27%
2008	181	3%	134	47	26%
2009	182	3%	152	30	16%
2010	200	4%	156	44	22%
Total	5243		4367	876	17%

Table 1 continued
Panel B: The number of foreign acquisitions by acquirer country

Country	Number of Acquisitions	Portion of Foreign Acquisitions
United Kingdom	176	20%
Canada	153	17%
France	74	8%
Germany	68	8%
Netherlands	53	6%
Switzerland	41	5%
Japan	39	4%
Bermuda	33	4%
Sweden	27	3%
Australia	21	2%
Italy	20	2%
Israel	19	2%
Spain	15	2%
India	13	1%
Ireland-Rep	11	1%
Belgium	10	1%
Denmark	10	1%
Finland	9	1%
Bahrain	8	1%
Russian Fed	8	1%
Singapore	8	1%
Mexico	7	1%
Hong Kong	6	1%
Norway	6	1%
Various[#]	41	5%
Total	876	100%

This table presents details about the composition of the main sample. Panel A provides the number of acquisitions, and type of acquirer, by year. Panel B provides the number of foreign acquisitions by acquirer country.
[#]21 countries with less than 5 acquisitions each have been combined for brevity.

Table 2: Sample Characteristics
Panel A: Descriptive statistics

Variable	N	Mean	SD	Min	Max
Foreign Acquirer Indicator	5,243	0.17	0.37	0.00	1.00
PRE	4,383	0.01	0.04	0.00	0.25
PRE Indicator	4,611	0.16	0.37	0.00	1.00
Repatriation Cost	5,243	0.12	0.68	0.00	8.51
Foreign Earnings Fraction	5,243	0.10	0.26	0.00	1.00
Any Foreign Earnings Indicator	5,243	0.33	0.47	0.00	1.00
Foreign Sales	5,243	0.10	0.21	0.00	1.07
NOL Carryforwards	5,243	0.22	0.71	0.00	4.47
Loss Indicator	5,243	0.21	0.40	0.00	1.00
Profitability	5,243	0.04	0.19	-0.86	0.37
Log Total Assets	5,243	5.57	1.79	2.41	10.83
Intangibles	5,243	0.10	0.17	0.00	0.70
Leverage	5,243	0.17	0.22	0.00	1.00

Panel B: Acquirer target pairings

		Acquirer		
		Foreign	***Domestic***	*Total*
T	***Domestic Only***	477	3,052	*3,529*
a		14%	86%	*100%*
r	***U.S. Multinational***	399	1,315	*1,714*
g		23%	77%	*100%*
e				
t	*Total*	*876*	*4,367*	

Table 2 continued
Panel C: Correlation matrix (Pearson)

Variable		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Foreign Acquirer Indicator	(1)	1												
PRE	(2)	0.073	1											
PRE Indicator	(3)	0.095	0.699	1										
Repatriation Cost	(4)	0.034	0.37	0.236	1									
Foreign Earnings Fraction	(5)	0.053	0.446	0.424	0.412	1								
Any Foreign Earnings Indicator	(6)	0.128	0.358	0.499	0.257	0.547	1							
Foreign Sales	(7)	0.102	0.42	0.408	0.272	0.481	0.533	1						
NOL Carryforwards	(8)	0.003	-0.045	-0.064	-0.021	0.014	-0.015	0.051	1					
Loss Indicator	(9)	0.02	-0.1	-0.12	-0.049	-0.005	-0.041	0.021	0.397	1				
Profitability	(10)	0.022	0.122	0.141	0.085	0.04	0.123	0.043	-0.472	-0.724	1			
Log Total Assets	(11)	0.017	0.135	0.208	0.06	0.072	0.108	-0.025	-0.281	-0.364	0.28	1		
Intangibles	(12)	0.037	0.054	0.122	0.013	0.07	0.112	0.034	0.017	-0.022	0.075	0.052	1	
Leverage	(13)	-0.002	-0.028	0.007	-0.006	-0.021	-0.007	-0.074	-0.046	-0.113	0.143	0.186	0.152	1

This table presents summary statistics for the main sample. Panel A provides descriptive statistics for the variables included in the probit models. Note that the two measures of PRE have smaller N because this measure is missing for some targets, due to failure in the 10-K matching process and text search algorithm. Panel B presents a matrix of the sample by acquirer (foreign and domestic) and target (U.S. operations only or multinational, defined as having any foreign earnings) type. A chi-squared test for independence is highly significant (p-value <0.001). Panel C presents Pearson correlations among the variables.

Table 3: PRE and Acquirer Location

Variable	(1)	(2)	(3)
PRE	0.581***	0.357**	0.280*
	(0.14)	(0.16)	(0.15)
NOL Carryforwards	0.007	0.005	0.005
	(0.01)	(0.01)	(0.01)
Loss Indicator	0.078***	0.065***	0.071***
	(0.02)	(0.02)	(0.02)
Profitability	0.138***	0.099**	0.120***
	(0.05)	(0.05)	(0.05)
Log Total Assets	0.004	0.003	0.005
	(0.00)	(0.00)	(0.00)
Intangibles	0.068**	0.05	0.066**
	(0.03)	(0.03)	(0.03)
Leverage	-0.018	-0.013	-0.009
	(0.03)	(0.03)	(0.03)
Foreign Earnings Fraction		-0.051*	
		(0.03)	
Any Foreign Earnings Indicator		0.103***	
		(0.02)	
Foreign Sales/Total Assets			0.134***
			(0.03)
Pseudo R-squared	0.010	0.022	0.015
N	4,383	4,383	4,383

This table presents marginal effects (with Huber-White robust standard errors reported in parentheses) f estimating probit models with an indicator variable for 'foreign-ness' of the acquirer as the dependent variable (an indicator variable set equal to one if the acquirer is foreign and zero otherwise). The independent variable of interest is the stock of permanently reinvested earnings divided by total target assets. Note that all non-indicator variables are winsorized at 1% and 99%. Detailed variable definitions provided in Appendix B. Column (1) includes only target firm-level accounting controls, while the secc and third columns include different sets of controls (again at the target level) to measure the importance foreign activities to the domestic target firm. ***, **, and * indicate significance at the 1%, 5% and 10% levels (two-sided test).

Table 4: PRE Indicator and Acquirer Location

Variable	(1)	(2)	(3)
PRE Indicator	0.093***	0.044**	0.060***
	(0.02)	(0.02)	(0.02)
NOL Carryforwards	0.004	0.003	0.002
	(0.01)	(0.01)	(0.01)
Loss Indicator	0.079***	0.069***	0.075***
	(0.02)	(0.02)	(0.02)
Profitability	0.127***	0.097**	0.113**
	(0.05)	(0.05)	(0.05)
Log Total Assets	0.004	0.003	0.005
	(0.00)	(0.00)	(0.00)
Intangibles	0.059*	0.049	0.063*
	(0.03)	(0.03)	(0.03)
Leverage	-0.022	-0.018	-0.014
	(0.03)	(0.03)	(0.03)
Foreign Earnings Fraction		-0.044*	
		(0.02)	
Any Foreign Earnings Indicator		0.091***	
		(0.02)	
Foreign Sales/Total Assets			0.108***
			(0.03)
Pseudo R-squared	0.014	0.022	0.018
N	4,611	4,611	4,611

This table presents marginal effects (with Huber-White robust standard errors reported in parentheses) from estimating probit models with an indicator variable for 'foreign-ness' of the acquirer as the dependent variable (an indicator variable set equal to one if the acquirer is foreign and zero otherwise). The independent variable of interest is an indicator variable set to one if the target has any PRE. Note that all non-indicator variables are winsorized at 1% and 99%. Detailed variable definitions are provided in Appendix B. Column (1) includes only target firm-level accounting controls, while the second and third columns include different sets of controls (again at the target level) to measure the importance of foreign activities to the domestic target firm. ***, **, and * indicate significance at the 1%, 5% and 10% levels (two-sided test). Note also that the sample size increases from Table 3 to Table 4 because some firms report only the presence of PRE and not the actual amount.

Table 5: Estimated Repatriation Tax Cost and Acquirer Location

Variable	(1)	(2)	(3)
Repatriation Cost	0.021***	0.012*	0.012*
	(0.01)	(0.01)	(0.01)
NOL Carryforwards	0.007	0.003	0.004
	(0.01)	(0.01)	(0.01)
Loss Indicator	0.081***	0.068***	0.076***
	(0.02)	(0.02)	(0.02)
Profitability	0.120***	0.075*	0.100**
	(0.04)	(0.04)	(0.04)
Log Total Assets	0.007**	0.005	0.007**
	(0.00)	(0.00)	(0.00)
Intangibles	0.104***	0.079***	0.099***
	(0.03)	(0.03)	(0.03)
Leverage	-0.014	-0.008	-0.005
	(0.02)	(0.02)	(0.02)
Foreign Earnings Fraction		-0.034	
		(0.02)	
Any Foreign Earnings Indicator		0.096***	
		(0.01)	
Foreign Sales/Total Assets			0.119***
			(0.02)
Pseudo R-squared	0.009	0.021	0.014
N	5,243	5,243	5,243

This table presents marginal effects (with Huber-White robust standard errors reported in parentheses) from estimating probit models with an indicator variable for 'foreign-ness' of the acquirer as the dependent variable (an indicator variable set equal to one if the acquirer is foreign and zero otherwise). The independent variable of interest is based on the Foley et al. (2007) measure of the target firm's potential tax-related repatriation costs (specifically, the three year measure if it is available; if not, the two year measure; then the one year measure; if all of these are missing, a zero is imputed). Note that all non-indicator variables are winsorized at 1% and 99%. Detailed variable definitions are provided in Appendix B. Column (1) includes only target firm-level accounting controls, column (2) and (3) include additional controls to measure the importance of foreign activities to the domestic target firm. ***, **, and * indicate significance at the 1%, 5% and 10% levels (two-sided test).

Table 6: Acquirer Location and Worldwide vs. Territorial Tax Systems

Variable	(1)	(2)	(3)	(4)
Subsample composition/Dependent variable coding:				
US acquirers	0	0		0
Foreign acquirers - WW		1	0	0
Foreign acquirers - territorial	1		1	1
Variable				
PRE	0.333**	0.044	0.488	0.316**
	(0.13)	(0.11)	(0.44)	(0.13)
Foreign Earnings Fraction	-0.021	-0.039**	0.105	-0.013
	(0.02)	(0.02)	(0.08)	(0.02)
Any Foreign Earnings Indicator	0.063***	0.063***	-0.083**	0.051***
	(0.01)	(0.01)	(0.04)	(0.01)
NOL Carryforwards	0.003	0.003	-0.008	0.003
	(0.01)	(0.01)	(0.03)	(0.01)
Loss Indicator	0.038*	0.040**	-0.067	0.031
	(0.02)	(0.02)	(0.06)	(0.02)
Profitability	0.058	0.055*	-0.111	0.049
	(0.04)	(0.03)	(0.14)	(0.04)
Log Total Assets	0.003	0.000	0.009	0.003
	(0.00)	(0.00)	(0.01)	(0.00)
Intangibles	0.021	0.036*	-0.084	0.017
	(0.03)	(0.02)	(0.10)	(0.03)
Leverage	-0.023	0.012	-0.078	-0.023
	(0.02)	(0.02)	(0.09)	(0.02)
Pseudo R-squared	0.017	0.029	0.012	0.015
N	4,132	3,889	745	4,383

This table presents marginal effects (with Huber-White robust standard errors reported in parentheses) from estimating probit models with various indicator variables as the dependent variable (an indicator variable set equal to one if the acquirer is foreign and zero otherwise). The independent variable of interest is the stock of permanently reinvested earnings divided by total target assets. Note that all non-indicator variables are winsorized at 1% and 99%. Detailed variable definitions are provided in Appendix B. Both column (1) and (2) include acquisitions with U.S. acquirers, with column (1) adding foreign acquirers from territorial countries and column (2) instead adding those from worldwide countries. Column (3) removes the domestic acquirer observations and redefines the dependent variable to equal to one if the foreign acquirer comes from a territorial country, and zero if from a worldwide country. The column (4) includes both U.S. acquirers and acquirers from other worldwide countries in the zero group and set the dependant indicator variable equal to one for acquisition by territorial country acquirers. ***, **, and * indicate significance at the 1%, 5% and 10% levels (two-sided test).

Table 7: Acquirer Location and Switches in Tax Systems

Variable	(1)	(2)
PRE	1.312***	0.960***
	(0.42)	(0.37)
Foreign Earnings Fraction	0.029	0.035
	(0.09)	(0.08)
Any Foreign Earnings Indicator	0.052	0.046
	(0.04)	(0.04)
NOL Carryforwards	0.043*	0.034*
	(0.02)	(0.02)
Loss Indicator	0.073	0.051
	(0.09)	(0.07)
Profitability	-0.005	-0.039
	(0.17)	(0.15)
Log Total Assets	-0.006	-0.004
	(0.01)	(0.01)
Intangibles	0.191**	0.156*
	(0.09)	(0.09)
Leverage	-0.009	-0.003
	(0.10)	(0.08)
Country Fixed Effects	No	Yes
Pseudo R-squared	0.173	0.294
N	214	212

This table presents marginal effects (with Huber-White robust standard errors reported in parentheses) from estimating probit models with an indicator variable for type of tax system as the dependent variable (an indicator variable set equal to one if the acquirer faces a territorial system and zero if the acquirer faces a worldwide system). The independent variable of interest is the stock of permanently reinvested earnings divided by total target assets. Note that all non-indicator variables are winsorized at 1% and 99%. Detailed variable definitions are provided in Appendix B. This table restricts the sample to targets of foreign acquisitions where the acquirer is resident in a country that changed from a worldwide to a territorial tax system between 1995 and 2010. The majority of the sample consists of acquirers from the U.K. (164 deals) and Japan (38 deals), which both reformed their systems from worldwide to territorial as of 2009. The remaining 25 observations are from Italy, New Zealand, and Finland. Country fixed effects (for the 5 countries in the above sample) are included in columns (2) and (4). ***, **, and * indicate significance at the 1%, 5% and 10% levels (two-sided test).