

## Is U.S. Multinational Intra-Firm Dividend Policy Influenced by Capital Market Incentives?

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**Abstract:** This paper finds evidence to suggest that public-company reporting by U.S. multinational corporations (MNCs) creates disincentives to repatriate foreign earnings to the U.S. Firms that operate under both U.S. international tax policy and U.S. accounting policy potentially face two costs when they repatriate foreign earnings: an actual cash tax liability *and* a reduction to reported pre-tax earnings for the amount of that tax liability. We combine a confidential dataset of financial and operating characteristics of MNCs with public company data and find evidence that capital market incentives influence repatriation behavior. Specifically, we find that, relative to private firms, public firms are more sensitive to the tax cost of repatriation, and are less likely to trigger tax costs in the fourth quarter. An analysis of domestic and foreign investment behavior reveals that repatriations of public firms, with the greatest incremental book cost of repatriating earnings, map less into investment activity suggesting that these firms are repatriating for an alternative purpose.

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## **1. Introduction**

The U.S. tax system plays a role in the ability of U.S. multinational corporations (MNCs) to compete in the global marketplace. Various opponents of current tax policy argue that our international tax system has a negative effect on the competitiveness of U.S. firms and creates incentives for multinational firms to “park” foreign subsidiary profits overseas. In a June 2007 speech, Treasury Assistant Secretary for Tax Policy, Eric Solomon, calls our current tax system “a blend of full inclusion and territorial systems”, whereby MNCs can defer U.S. tax on earnings of foreign affiliates until the earnings are repatriated (“repatriations”) to the U.S. As of 2002, MNCs held an estimated \$640 billion abroad (Brumbaugh 2003). As a result, there is enormous interest in the role of the U.S. tax system in cultivating these large pools of undistributed foreign earnings.

Adding to this interest, the corporate response to the American Jobs Creation Act of 2004 (“AJCA”) was unexpectedly high. Existing research estimates that a one percent decrease in the tax rate on repatriations increases repatriations by one percent (Hines and Hubbard 1990). Given that the AJCA temporarily reduced the maximum tax rate on repatriations from 35 percent to 5.25 percent, Altshuler and Grubert (2006) note that the tax rate reduction alone cannot explain the six fold increase in repatriations in the response to the AJCA. The authors conjecture that prior literature has underestimated the efficiency losses caused by the U.S. system of taxing foreign earnings. This overwhelming response to the AJCA provides the impetus for our analysis.

In this study, we bring a financial reporting perspective – in an international tax policy context – to examine the role of a non-tax factor in the repatriation decisions of multinational firms. Specifically, we investigate whether the financial statement effects of U.S. repatriation taxes affect firms’ decisions to repatriate foreign earnings. Our objective is to provide a multidisciplinary approach to studying repatriation decisions that will help researchers and policy makers better estimate the efficiency losses created by the U.S. tax and financial reporting systems.

A U.S. MNC pays U.S. taxes on foreign earnings when the earnings are remitted as a dividend to the U.S. parent. The amount of U.S. tax due is the dividend grossed-up for foreign taxes paid times the U.S. parent's statutory tax rate minus the foreign tax credit. Generally, the foreign tax credit equals the amount of foreign taxes paid on the foreign earnings up to the amount of the U.S. tax liability. Therefore, if the foreign tax rate is greater than the U.S. tax rate, the MNC owes no incremental U.S. tax on the repatriated earnings. Further, if a MNC repatriates earnings from more than one country, it can use credits generated from high tax subsidiaries to offset U.S. taxes on repatriations from low tax subsidiaries. Therefore, the residual or incremental U.S. tax liability due upon repatriation (i.e. the repatriation tax) can be thought of as the difference between the U.S. tax rate and the average foreign tax rate paid on the repatriated foreign earnings.

Financial reporting can affect the decision to repatriate foreign earnings through the reporting rules under Accounting Principles Board Opinion No. 23 (APB 23). In general, MNCs recognize a tax expense for the residual U.S. tax liability on foreign earnings in the same year they recognize the foreign earnings. Because the U.S. tax is not paid until the earnings are repatriated, this accounting treatment often results in MNCs recognizing the repatriation tax expense in the financial statements long before they actually pay it. Because of the potentially permanent nature of foreign investment, APB 23 allows MNCs to defer recognizing the repatriation tax expense until repatriation if they designate the earnings as indefinitely reinvested abroad.<sup>1</sup> Though this accounting standard allows firms to delay recognizing the income tax expense, if the earnings are eventually repatriated, then the income tax expense must then be recognized with no corresponding income increase from the foreign earnings on which the taxes are paid, because that income was recognized in a prior accounting period. As a result, firms under capital market pressures have incentives to alter their repatriation behavior to delay recognition of the tax

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<sup>1</sup> Statement of Financial Accounting Standards No. 109 upheld the accounting treatment of indefinitely reinvested earnings, but added the requirement that firms disclose the potential U.S. tax liability on unremitted foreign earnings in the financial statement footnotes or state that the potential liability is not practicable to estimate.

expense in the financial statements. This incentive raises the possibility that financial reporting plays a role in the build-up of undistributed foreign earnings.

Recent survey evidence supports this conjecture that recognition of repatriation tax expense in the financial statements is an important factor in the repatriation decision. Executive survey responses tabulated by Graham, Hanlon, and Shevlin (2008) suggest that recognition of the accounting tax expense matters as much as the cash flow effects of the actual repatriation tax liability when deciding whether to repatriate foreign earnings. However, their evidence is based on executive survey responses at a single point in time. Our empirical analysis allows us to examine a time-series of actual repatriation decisions and test for the effects of capital market pressures on these decisions.

To investigate the effect of financial reporting incentives on repatriations of foreign earnings, we first follow the economics and finance literature to model the decision to repatriate foreign subsidiary earnings. Similar to Desai, Foley, and Hines (2001) we model annual dividend repatriations from foreign subsidiaries as a function of earnings and the tax cost of repatriation. In addition, we include controls for investment opportunities and financing costs in the U.S. and abroad.

We then study the effect of financial reporting incentives on repatriation decisions using two proxies for costs associated with financial reporting under APB No. 23. First, we investigate the effects of firm ownership on repatriation behavior; that is, whether private firms which are relatively less sensitive to capital market pressures exhibit different repatriation patterns than public firms. This focus on public versus private firms allows us to separate the cash flow effect of repatriation taxes from the financial reporting effect of repatriation taxes. Second, among public firms, we investigate whether the amount that firms repatriate is related to the extent of their tax expense deferral under APB 23. All else equal, the greater the deferral of the incremental repatriation tax in prior periods, the greater the financial reporting cost to repatriating earnings in

the current period. After controlling for public firms' costs of financing and investment activity, we test the effect of a firms' APB 23 deferral on the amount repatriated to help us further disentangle the cash flow effect of repatriation from the financial reporting effect.

Our sample includes 499 public firms and 112 private firms from 1999 through 2004 that have required data to compute repatriations from foreign subsidiaries, current and lagged earnings, and necessary control variables. We find that, on average, public firms are more sensitive to the tax cost of repatriation than private firms, and that public firms with high amounts of foreign earnings designated as permanently reinvested under APB no. 23 are more sensitive to the tax cost of repatriating than other public firms. Similarly, in an analysis of quarterly repatriation behavior, we find that public firms are more sensitive to the tax cost of repatriating during the fourth quarter than private firms, and that public firms with high amounts of foreign earnings designated as permanently reinvested under APB no. 23 are more sensitive to the tax cost of repatriating during the fourth quarter than other public firms. This result is consistent with public firms facing a financial reporting cost to repatriating avoiding repatriations that would generate a U.S. residual tax liability in the fourth quarter, as more information about actual annual earnings becomes available.

Next, we analyze whether repatriations of public and private firms map differently into investment activity because theoretical literature on repatriation decisions suggests that firms should reinvest foreign earnings where they can earn the highest rate of return (Hartman 1985). Repatriating funds to the U.S. implies that the firm has profitable investment opportunities in the U.S. However, firms that face relatively higher capital market pressure may be inclined to alter the link between repatriations and domestic investment in a manner that potentially benefits reported net income. Said another way, the more sensitive a firm is to the financial reporting cost of repatriation, the more likely the firm is to choose to repatriate for reporting reasons than for investment purposes. We find that the repatriations of public firms with high amounts of

indefinitely reinvested earnings map less positively into new domestic investment than other public firms. In addition, we find that the unremitted current foreign earnings of public firms with high amounts of indefinitely reinvested earnings map less positively into new foreign investment than other public firms. These firms also have higher foreign cash holdings than other public firms suggesting that they have “trapped” equity abroad. Overall, our results suggest that there is a delinking between repatriation and investment for firms facing capital markets pressure. Again, we interpret this as evidence that financial reporting incentives affect firms’ repatriation decisions.

This study makes two contributions to the literature. First, our evidence suggests that financial reporting considerations are important in the decision to repatriate foreign subsidiary earnings. Understanding non-tax factors – such as financial reporting incentives - that affect MNC repatriation decisions can aid our understanding of the responsiveness of repatriations to changes in the tax system. The recognition of financial accounting tax expense upon repatriation is an additional cost of repatriation that has been ignored both in prior literature and in the assessment of firms’ responses to the AJCA. Our empirical evidence that capital market pressures to report high accounting earnings deter repatriation decisions is consistent with both the build-up of undistributed foreign earnings before the AJCA and the surge in repatriations under the AJCA. Thus, our study informs the broader policy debate over reforms to our international tax system.

Second, this paper provides information to standard setters that are considering the merits of allowing firms to defer recognizing the U.S. tax liability on repatriations of foreign subsidiary earnings. The SEC recently issued regulations allowing some U.S. firms to adopt IFRS as early as 2009. While both U.S. GAAP and IFRS allow firms to avoid recognizing the potential U.S. repatriation tax liability, the topic received scrutiny as part of the IASB and FASB short-term convergence project on income taxes. In fact, the Global Oversight Committee of the Financial Executives Institute claims that the adoption of a non U.S. accounting standard treatment for unremitted earnings would have been “a disaster for U.S. companies” because U.S. tax and

accounting structures are fundamentally different from European structures. The group successfully lobbied to the European Roundtable to have the issue of APB 23 rescission removed from the convergence project.<sup>2</sup> However, a criticism of allowing deferral is that the U.S. is one of only a few countries to use a worldwide tax system. Most countries use a territorial system in which the home country only taxes income earned within its borders. Consequently, while IFRS is meant to increase consistency in global financial reporting, the exception for deferred taxes on foreign earnings effectively allows U.S. firms to defer income tax recognition, but does not give firms based in countries with territorial tax systems this option. The results of this study provide evidence that APB 23 creates incentives to leave earnings off shore.

The paper proceeds as follows: Section 2 discusses prior literature and the hypotheses, Section 3 describes our data, Section 4 describes our methodology, Section 5 discusses our results and Section 6 concludes.

## **2. Background and Hypotheses**

### *2.1 Taxation of Foreign Subsidiary Earnings*

In the following discussion, we assume that a MNC has a foreign affiliate that generates positive earnings and that the MNC faces an additional tax liability upon repatriation of those earnings to the U.S. (i.e., the foreign affiliate faces a home country tax rate lower than the U.S. rate). From a tax policy perspective, the MNC has two choices, each with different effects on the MNC's tax liability. The MNC can reinvest the earnings in the foreign country and defer payment of the repatriation tax or it can repatriate the earnings to the U.S. and pay the repatriation tax. Thus, tax policy determines *when the tax is paid*.

Much of the previous work on repatriation decisions in the economics and finance literatures emphasizes tax factors as a determinant of repatriations. Hartman (1985) shows

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<sup>2</sup> [http://www.thefreelibrary.com/Technical+committee+profile:+Global+Oversight+Committee+\(GOC\).-a0130779987](http://www.thefreelibrary.com/Technical+committee+profile:+Global+Oversight+Committee+(GOC).-a0130779987)

theoretically that when after-tax returns and tax rates are constant, repatriation taxes do not affect the repatriation decision because all income will eventually be taxed at the U.S. tax rate. However, subsequent empirical evidence suggests that dividend remittances are decreasing in repatriation tax rates (Hines and Hubbard 1990; Altshuler and Newlon 1993; Grubert 1998; Desai, Foley, and Hines 2001; Altshuler and Grubert 2003; Foley, Hartzell, Titman, and Twite 2007). Altshuler, Newlon, and Randolph (1995) reconcile these conflicting findings by distinguishing between permanent and transitory changes in tax rates. They find that dividend repatriations are negatively related to the transitory tax price of repatriation but are not related to the permanent tax price of repatriation.

More recently, Desai, Foley and Hines (2007) examine non-tax factors that shape MNC repatriation policy. They find that traditional corporate finance concerns, such as domestic financing needs (parent leverage and shareholder payout policies), as well as agency problems inside firms (subsidiary control), also affect MNC repatriation policy. Altshuler and Grubert (2002) add several investment-repatriation strategies to the standard model where a multinational with a subsidiary located in a low tax country can either pay a taxable dividend or reinvest in the real operations of the subsidiary. Their theoretical and empirical analysis suggests that firms can achieve the equivalent of repatriation (i.e., getting cash to the parent) without incurring the repatriation tax cost, with the caveat that these strategies are not costless. The authors describe how parents might borrow against funds abroad and/or reorganize in a manner that increases the foreign tax credit allocated to repatriations (i.e., routing low-tax subsidiary earnings through high tax subsidiaries or having high-tax subsidiaries invest in low-tax subsidiaries) to mitigate the tax cost of repatriations. However, they illustrate that firms involved in these transactions incur costs that substantially decrease the continued deferral of the repatriation tax.

## 2.2 *Accounting for Foreign Subsidiary Earnings*

One factor not considered by existing estimates of the effect of taxes on repatriation decisions is the financial reporting cost. Financial reporting can affect the decision to repatriate because of the rules governing accounting for U.S. income taxes on foreign subsidiary earnings under APB 23 and SFAS 109. Under these accounting standards, if a firm intends to repatriate foreign subsidiary earnings, then the actual timing of the repatriation generally does not affect the financial reporting for the U.S. repatriation tax. However, if a firm reinvests foreign subsidiary earnings, then it can designate the earnings as permanently reinvested (hereafter referred to as “PRE”) and avoid recognizing the U.S. tax liability in current earnings. In this case, after-tax financial accounting earnings increase when firms designate foreign subsidiary earnings as permanently reinvested. Conversely, after-tax financial accounting earnings decrease when firms repatriate earnings previously designated as permanently reinvested or when they repatriate foreign subsidiary earnings that would otherwise have been designated as permanently reinvested.

In Figure 1, we summarize the accounting effects for the various repatriation decisions that MNCs face. The MNC can repatriate the foreign subsidiary earnings, in which case it also recognizes the repatriation tax as an expense in the financial statements. This choice is depicted as Scenario I in Figure 1. The after-tax earnings effect of this choice is the foreign earnings less repatriation taxes. Alternatively, the MNC can reinvest the earnings abroad and recognize the potential U.S. tax liability as an expense on the financial statements. This choice is depicted in Scenario II, and has the same after-tax earnings effect as Scenario I. A third option is to reinvest the earnings abroad and designate the earnings as PRE under APB 23. In this case, depicted in Scenario III, the MNC does not recognize the repatriation tax expense, and the after-tax earnings effect is just the positive pre-tax effect of the recognition of foreign subsidiary earnings. However, once the earnings are designated as PRE, if they are eventually repatriated, then the U.S. tax expense will have a relatively greater negative effect on earnings because the tax expense is recognized in a

different (i.e., later) period than the earnings. In this case, as in Scenario IV, the after-tax earnings effect is current foreign earnings less the incremental U.S. tax on current and prior period foreign earnings. Scenario IV results in a potentially large reduction in after-tax earnings due to the timing of income tax expense recognition. Finally, Scenario V shows the earnings and cash flow consequences of repatriations of current and prior earnings by firms that do not designate earnings as permanently reinvested. These five scenarios illustrate that accounting policy determines *when the tax expense is recognized in the financial report* and need not coincide with the period in which the related 'taxed' income is earned.

Empirically, MNCs make extensive use of the PRE designation as evidenced by the \$420 billion of PRE reported in the financial statements of the S&P 500 at the end of 2002 (Bear Sterns 2005). Krull (2004) finds that MNCs increase amounts designated as PRE to maximize reported after-tax earnings and meet earnings benchmarks.<sup>3</sup> However, by designating foreign earnings as permanently reinvested and deferring expense recognition, MNCs create a financial reporting cost to future repatriation of foreign earnings. While Krull (2004) examines decisions about PRE designations in a capital markets framework, the study does not address whether the expense recognition affects actual repatriation decisions of MNCs. We extend this study by investigating whether the financial reporting consequences of recognizing U.S. taxes on foreign earnings affect firms' decisions to repatriate foreign subsidiary earnings.

### 2.3 Hypotheses

To study this question, we must disentangle the cash flow effects of repatriations from the financial reporting effects. This endeavor can be challenging because the two effects are of the same dollar magnitude and often occur together. In fact, from Figure 1, the only scenarios for which

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<sup>3</sup>Other earnings management literature finds evidence that firms manage income tax accruals (Schrand and Wong 2003; Dhaliwal, Gleason and Mills 2004; Krull 2004) and real activities (Baber, Fairfield, and Haggard 1991; Gunny 2005; Zang 2005; Rochowdhury 2006) to meet earnings targets such as analyst forecasts and last year's earnings.

the two effects do not move together are Scenarios II and V in which firms reinvest foreign earnings but do not designate them as PRE.

We attempt to disentangle the cash effect from the financial reporting effect by identifying factors across which the financial reporting costs vary while the cash flow effects are relatively constant. The first factor we identify utilizes firm ownership – public versus private - to capture differences in capital market pressures that create incentives to report higher earnings. The cash flow effects of repatriations do not vary systematically across public and private firms because both groups are subject to the same tax laws and the same economic incentives to repatriate. However, the financial reporting incentives can vary across public and private firms because of the difference in the constituents to which the two groups report. The managers of public firms have private information, report to current and potential investors, and are evaluated on their performance based on the information they provide. Therefore, managers have incentives to report higher earnings in order to increase both the value of the firm and their compensation. In contrast, private firms have high levels of insider ownership, encounter less information asymmetry between managers and investors, and therefore have relatively less incentive to undertake behavior to report higher earnings. Thus, we expect that public firms will be more constrained by the financial reporting effects of repatriations than private firms, and test the following hypothesis:<sup>4, 5</sup>

*H<sub>1a</sub>*: Public firms are more sensitive to the tax cost of repatriating than private firms.

The second factor we identify utilizes the designation of earnings as permanently reinvested under APB 23 as an estimate of the financial reporting costs of repatriation. Recall from Figure 1 that these designations alter the timing of the expense recognition and not the actual cash

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<sup>4</sup> We argue that private firms should be relatively less sensitive to the reporting cost of repatriations since private company executives' compensation packages do not rely on a market determined stock price.

<sup>5</sup> As an aside, generating excess foreign tax credits (e.g., by repatriating from a high tax country) can also lead to a favorable financial reporting consequence. Firms that have designated all unremitted foreign earnings as indefinitely invested will generate deferred tax assets (and, hence, a deferred tax benefit) when they generate excess credits by repatriating from high tax jurisdictions.

tax liability. Among public firms, those that have designated all unremitted foreign earnings as PRE are more likely to incur a financial reporting cost when repatriating than public firms that accrue deferred tax liabilities. Furthermore, public firms that have designated all of their unremitted foreign earnings as PRE cannot avoid tax expense recognition in their financial statements by repatriating a portion of their non-PRE earnings. Since we cannot determine whether firms repatriate PRE or non-PRE, testing for differences among public firms conditional on their reported level of PRE helps us to further disentangle tax costs from financial reporting costs. If high amounts of PRE create financial reporting costs to repatriation, then firms with high amounts of PRE will be more sensitive to the tax cost of repatriation.<sup>6</sup> Hence, we test the following hypothesis:

*H<sub>1b</sub>*: Public firms with high amounts of permanently reinvested earnings are more sensitive to the tax cost of the repatriation than other public firms.

If public firms' repatriation decisions are associated with the need to manage investor perceptions of firm performance, in addition to the need for cash, then it is possible that public firms' repatriation patterns throughout the year differ from private firms. As the fiscal year progresses, firms have more information about actual annual earnings. Therefore, we expect that public firms are more likely to make repatriation decisions in the fourth quarter so that they can weigh the need for cash with the need to manage earnings. However, the direction of the effect of the tax cost of repatriations on these decisions is unclear. Public firms may be less sensitive to the tax cost of repatriations in the fourth quarter when earnings uncertainty is reduced. Conversely, they may be more sensitive to the tax cost of repatriations in later quarters as they adjust repatriations to meet reporting goals. Therefore we predict the following:

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<sup>6</sup> We cannot obtain PRE for private firms through public disclosures. However, if private companies are subject to the same reporting pressures then this biases against us finding results.

*H<sub>2</sub>*: The effect of the tax cost of repatriation on fourth quarter repatriations is significantly different for public firms than for private firms and the magnitude of this effect is greater for firms with high amounts of permanently reinvested earnings.

Finally, we investigate how repatriation decisions map into new investment activity. Recall that Hartman (1985) argues that firms will repatriate when the after-tax foreign rate of return on investment opportunities in the foreign subsidiary decline below those available elsewhere. If capital market pressures play a role in the repatriation decision of public firms, then the relation between the repatriation decisions and investment will be lower for public firms than for private firms. These conjectures lead to our final hypotheses:

*H<sub>3a</sub>*: The association between repatriation decisions and investment behavior is lower for public firms than for private firms.

*H<sub>3b</sub>*: The association between repatriation decisions and investment behavior is lower for public firms with high levels of permanently reinvested earnings than for other public firms.

### **3. Data**

Examining whether repatriation behavior of MNCs is affected by financial reporting rules necessitates measuring - at a minimum - repatriation activity, the tax cost of the repatriation, and the financial reporting cost of the repatriation. To construct these measures, we combine firm-level data from two sources. First, we obtain information on repatriations and the tax cost of those repatriations for MNCs from the results of two surveys conducted by the Bureau of Economic Analysis (BEA). Second, we hand collect PRE data from firms' SEC filings. By combining these two datasets, we can identify MNCs in the BEA data that face varying degrees of capital market pressure. Thus, the combination of these two data sources allows us to incorporate capital market incentives into an empirical analysis of repatriation decisions.

We construct measures of repatriation activity and the tax cost of repatriation using two BEA Surveys of U.S. Direct Investment Abroad.<sup>7</sup> These surveys provide a panel of data on the financial and operating characteristics of U.S. MNCs operating abroad. The BEA defines U.S. direct investment abroad as direct or indirect ownership or control by a single U.S. legal entity of at least 10 percent of the voting securities of an incorporated foreign business enterprise or the equivalent interest in an unincorporated foreign business enterprise. A U.S. MNC is the combination of a single U.S. entity with direct investment abroad, called the U.S. parent, and at least one foreign business enterprise, called a foreign affiliate. United States MNCs are required to complete survey forms that cover both domestic and foreign operations. The information captured by each survey varies by year, affiliate size, and the U.S. parent's percentage ownership in the affiliate.<sup>8</sup> As a result of confidentiality assurances and penalties for noncompliance, the BEA believes that coverage of these surveys is close to complete and levels of accuracy are high.

The first BEA survey we use is the *Quarterly Balance of Payments Survey of U.S. Direct Investment Abroad*, which captures direct transactions between the domestic and foreign operations of U.S. multinationals and limited financial and operating information on foreign affiliates on a quarterly basis. From this survey, we collect quarterly repatriations, quarterly net income, and the country of incorporation for foreign affiliates in our sample. The second BEA survey is the *Annual (Benchmark) Survey of U.S. Direct Investment Abroad*, which captures more extensive financial and operating information for both the domestic and foreign operations of U.S. multinationals on an annual basis. In these survey data, we observe annual repatriations, domestic and foreign net income, sales, interest expense, capital expenditures, R&D, tax expense, assets, liabilities, as well as and intra-firm sales (e.g. sales between the parent and the affiliate as well as

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<sup>7</sup> See <http://www.bea.gov/surveys/diasurv.htm> for online versions of each survey. The quarterly survey is Form BE-577, the annual survey is form BE-11, and the benchmark survey is form BE-10.

<sup>8</sup> Primarily to reduce the reporting burden for MNCs, BEA uses reported data to estimate universe totals when surveys cover only larger affiliates or when only certain affiliates provide information on particular survey forms. Only reported data are used in this paper's analysis. Additional information on the BEA data can be found in Mataloni (2003).

sales between related affiliates). The BEA collects survey responses on a fiscal year basis, which is defined as the financial reporting year end. Additionally, the survey instructions require that U.S. multinationals report financial and operating data using Generally Accepted Accounting Principles in the United States.

To construct the sample for our analysis, we create a balanced panel of U.S. parents appearing in the BEA data for six consecutive years from 1999 through 2004. Because we examine the effects of financial reporting on repatriation decisions, we are interested in parent-affiliate groups, which consist of the U.S. parent company reporting to the BEA, and any foreign affiliates in which that parent has a direct investment. The BEA surveys capture information for foreign affiliates that meet a specific size threshold in terms of assets, sales, or net income.<sup>9</sup> Our panel of U.S. parents includes all U.S. MNCs with at least one affiliate reporting in each of those six years. We aggregate affiliate-level data to construct variables for our analysis by parent-affiliate group and eliminate the confounding effects of intercompany transactions when we measure aggregate variables, such as total domestic and foreign sales.

Table 1, Panel A describes our BEA sample and the results of matching our sample of U.S. parents to firms appearing in Compustat.<sup>10</sup> A total of 4,840 U.S. parent firms (57,164 affiliates) appear at least once in the BEA data from 1999 and 2004. Due to the size thresholds for reporting each year, only 805 parents (33,196 affiliates) have at least one affiliate reporting in every year during our sample period. We further restrict the sample by eliminating ADRs and foreign incorporated parents that are not likely to be constrained by either U.S. tax policy or U.S. accounting

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<sup>9</sup> The affiliate reporting threshold for 1999 is \$7 million, for 2000-2003, it is \$30 million and for 2004, it is \$10 million.

<sup>10</sup> We identify public companies in the BEA data by matching with Compustat on company name. While prior research [see Foley, Hartzell, Titman and Twite (2007), and Desai, Foley and Hines (2007)] has examined BEA data in conjunction with Compustat data by merging those datasets using IRS-issued employer identification numbers (EIN), a manual inspection of our results based on EINs suggested that this variable was not very accurate in matching our BEA panel dataset. For example, U.S. affiliates of foreign registrants are required to complete the BEA surveys. Many of these foreign registrants trade on the U.S. exchange as an ADR. However, they do not have an EIN at the parent level. Additionally, we do not include firms that appear in Compustat because they have publicly-issued debt.

policy when paying dividends to U.S. entities. We also eliminate banks and insurance companies because they are likely to have more opportunities to avoid repatriation taxes by redeploying capital around the world. Our final sample consists of 611 U.S. parent firms (27,032 affiliates); 499 parents (24,786 affiliates) that are publicly-traded entities and 112 parents (2,246 affiliates) that are privately-held entities.

Table 1, Panel B provides a comparison of our BEA sample to a sample of firms in Compustat with evidence (in Compustat) of foreign activity. There are a total of 10,858 U.S. incorporated firms appearing at least once in Compustat from 1999 through 2004. When we restrict the Compustat sample to firms that report total assets for six consecutive years and foreign pre-tax income for at least one year, we are left with 1,537 firms. Of those 1,537 firms, 1,058 do not appear in the BEA data, presumably due to the small size of their foreign operations. Interestingly, 76 firms appear in the BEA data that could not be identified as having foreign activity from Compustat alone. Thus, nearly 15 percent of our sample appears as domestic-only firms in Compustat. Table 1, Panel C suggests that broad industry representation is present in our sample, with a heavy emphasis on textiles, manufacturing, and retail. Both public and private firms have similar global presences as evidenced in Table 1, Panels D and E. With the exception of Canada and the U.K. (private firms have more Canadian activity, whereas public firms have more in the U.K.), the relative levels of investment by region are quite similar.

#### **4. Research Design**

Our hypotheses suggest that, if the financial accounting for repatriation taxes matters, firms that face capital market pressures will exhibit different repatriation patterns than firms that do not. Thus, we begin by testing whether the repatriation behavior of private firms is different than public firms after controlling for economic incentives to repatriate. To test  $H_{1a}$  and  $H_{1b}$  we estimate the following empirical model:

$$\begin{aligned}
\text{Repatriations/Sales} = & \gamma + \phi_1 \text{Foreign Prof} + \phi_2 \text{Domestic Prof} + \phi_3 \text{Lagged Repatriations} \\
& + \phi_4 \text{Tax Cost of Repatriating} + \phi_5 \text{Public} + \phi_6 \text{Public} \times \text{Tax Cost of Repatriating} \\
& + \phi_7 \log \text{PTI} + \phi_8 \text{Domestic Debt/Equity} + \phi_9 \text{Foreign Debt/Equity} \\
& + \phi_{10} \text{Domestic Interest Rate} + \phi_{11} \text{Foreign Interest Rate} \\
& + \phi_{12} \text{Foreign Cash/Sales} + \phi_{13} \text{Foreign Sales/Sales} \\
& + \phi_{14} \text{Domestic Loss Indicator} + \phi_{15} \text{Mandatory Dividend Score} \\
& + \phi_{16} \text{Corruption Score} + \phi_{17} \text{Infrastructure Score} + \phi_{18} \text{Capital Control Score} \\
& + \Sigma \text{Year, Industry Dummies} + \eta
\end{aligned} \tag{1}$$

The dependent variable in Equation (1) represents the dividends paid directly to the U.S. parent from foreign affiliates scaled by sales, where sales equals total domestic and foreign sales excluding intercompany sales. Because this variable is left-censored at zero, we estimate Equation (1) using a Tobit procedure. *Foreign Prof* is foreign net income scaled by foreign sales. *Domestic Prof* is domestic net income scaled by domestic sales. As in Desai, Foley, and Hines (2001) we include profitability measures to control for firms' target payout ratios. *Lagged Repatriations* is Repatriations/Sales in the previous year.

*Tax Cost of Repatriating* is the U.S. statutory tax rate of 35 percent less the average of the affiliates' tax rates estimated using aggregate foreign taxes paid on unremitted foreign earnings divided by unremitted pre-tax foreign earnings (called *BKR Tax Rate* in Table 2). We calculate *BKR Tax Rate* by aggregating affiliate-level foreign taxes and pre-tax income at the date the affiliate is first included in the BEA Survey or 1982, whichever is later. We then subtract repatriations to estimate foreign taxes and unremitted pre-tax foreign earnings in each year. The affiliate tax rate is foreign taxes divided by unremitted pre-tax foreign earnings. The difference between the U.S. statutory rate and *BKR Tax Rate* (as opposed to using, for example, an average of the affiliates' *current* tax rates) is a better approximation of the incremental taxes due upon repatriation since *BKR Tax Rate* is estimated in a manner similar to the U.S. foreign tax credit computation. We expect a negative coefficient on *Tax Cost of Repatriating*.

*Public* is an indicator variable equal to one if the parent is a public company and zero otherwise. The interaction term, *Public* × *Tax Cost of Repatriating*, tests H<sub>1a</sub>. If capital market incentives affect firms' responsiveness to repatriation taxes, then we expect public firms to be more sensitive to the tax cost of repatriation than private firms. Thus, we expect that the difference in public firms' repatriations relative to private firms is larger when the incremental U.S. taxes owed, and presumably the financial statement impact of repatriations, is larger. Therefore, all else equal, we expect a negative coefficient on *Public* × *Tax Cost of Repatriating*.

Equation (1) also includes controls for size of foreign operations, agency costs, financing constraints, and costs of financing as follows. To control for the size of foreign operations, we include *Log PTI*, the log of cumulative unremitted pre-tax foreign earnings. We expect a positive coefficient on this variable because firms with more foreign earnings have more funds available to repatriate. We include *Domestic Debt/Equity* and *Foreign Debt/Equity* to control for firms' debt service needs and capital structure. *Domestic Debt/Equity* is the ratio of domestic debt to domestic equity. *Foreign Debt/Equity* is the ratio of foreign debt to foreign equity. Firms may be more reluctant to repatriate if they have high foreign debt service suggesting a negative association between *Foreign Debt/Equity* and repatriations. We do not make a sign prediction on *Domestic Debt/Equity* because there are two opposing forces regarding its relation to repatriations. First, *Domestic Debt/Equity* may be positively associated with repatriations if firms remit funds to service domestic debt. Second, *Domestic Debt/Equity* could be negatively associated with repatriation activity because firms may have borrowed domestically against the unremitted foreign earnings.

We include *Domestic Interest Rate* to control for the parent's cost of borrowing. We anticipate that firms with a higher cost of borrowing in the US have higher dividend repatriations. We include *Foreign Interest Rate* to control for the affiliate's cost of borrowing. We expect that firms with a higher cost of borrowing abroad have lower dividend repatriations. We include *Foreign Cash/Sales* to proxy for the potential agency costs of excess cash and anticipate that firms

with more cash abroad have higher dividend repatriations. *Foreign Sales/Sales* is our proxy for the opportunity for multinational tax planning via investment. As discussed in Altshuler and Grubert (2002), firms with greater overseas activity have more opportunities to defer repatriation taxes through intercompany transfers.<sup>11</sup> We include *Domestic Loss Indicator*, an indicator variable equal to one if domestic pre-tax income is less than zero and zero otherwise, to control for differing tax incentives for firms with domestic losses. Power and Silverstein (2007) find that firms are less likely to repatriate earnings when the domestic parent has a loss because repatriations convert domestic net operating losses (NOLs) with a 20 year carryforward period into foreign tax credits (FTCs) with only a five year carry forward period.<sup>12</sup> Therefore, we anticipate a negative coefficient on *Domestic Loss Indicator*.

We also include a series of measures from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) and La Porta, Lopez-de-Silanes, and Shleifer (2008) to control for country-level variation in economic development and infrastructure. Each of these four country-level measures is first determined at the affiliate level, and then, using these affiliate level scores, we calculate the parent level score as the average of the affiliate scores. *Mandatory Dividend* equals one if the country requires dividends to be paid to shareholders, and zero otherwise. Mandatory dividend requirements should increase repatriations, and we expect a positive coefficient on *Mandatory Dividend Score*. *Corruption Score* is a one to ten scoring of the relative level of corruption in the country. High scores represent lower levels of corruption. We do not make a prediction for *Corruption Score* because it could be that corruption increases the cost of doing business such that more funds must be left in the country or that corruption causes U.S. parents to increase

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<sup>11</sup> Altshuler and Grubert (2003) also discuss that tiered subsidiary structures can reduce the incremental tax burden of repatriations. When we include a measure of a firm's indirect subsidiary activity in Equation (2), it is insignificant and does not alter inferences drawn.

<sup>12</sup> Power and Silverstein also point out that i) foreign tax credit usage is generally more restrictive than NOL usage because of the 'basket system', and ii) NOLs can be used to offset tax liability of U.S. source income whereas foreign tax credits can only offset tax liability on foreign source income. This flexibility makes NOL carryforwards more valuable than FTC carryforwards.

repatriations to reduce the probability of expropriation or theft. *Infrastructure Score* is a one to ten scoring (with 10 representing the best infrastructure) of the quality of the country's infrastructure. All else equal, the less developed a country's infrastructure, the more capital the company likely needs to invest in its operations. Therefore, we expect a negative coefficient on *Infrastructure Score*. Finally, we acquire information regarding country level capital flow restrictions from the International Monetary Fund. *Capital Control* is equal to one if the country restricts firms' ability to take funds out of the country, and zero otherwise. If a country restricts the flow of capital out of its jurisdiction, repatriations will be lower, suggesting a negative coefficient on *Capital Control Score*.

H<sub>1b</sub> predicts that firms with high amounts of permanently reinvested earnings are more sensitive to the tax cost of repatriations than other public firms. To test this hypothesis we include *HighPre* and its interaction with *Tax Cost of Repatriating*. *HighPre* is equal to one for public firms that report permanently reinvested earnings in their year t-1 financial statements that approximates their accumulated pre-tax income abroad, and zero otherwise.<sup>13</sup> We include *HighPre* and *HighPre* x *Tax Cost of Repatriating* to capture the incremental effect of the PRE designation on public firms' sensitivity to the tax cost of repatriating, and we estimate the following empirical model:

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<sup>13</sup> All inferences hold when we replace *HighPre* with a dummy variable equaling 1 if the firm reports PRE in its financial statements, 0 otherwise.

$$\begin{aligned}
\text{Repatriations/Sales} = & \gamma + \phi_1 \text{Foreign Prof} + \phi_2 \text{Domestic Prof} + \phi_3 \text{Lagged Repatriations} \\
& + \phi_4 \text{Tax Cost of Repatriating} + \phi_5 \text{Public} + \phi_6 \text{Public} \times \text{Tax Cost of Repatriating} \\
& + \phi_7 \text{HighPre} + \phi_8 \text{HighPre} \times \text{Tax Cost of Repatriating} \\
& + \phi_9 \text{Log PTI} + \phi_{10} \text{Domestic Debt/Equity} + \phi_{11} \text{Foreign Debt/Equity} \\
& + \phi_{12} \text{Domestic Interest Rate} + \phi_{13} \text{Foreign Interest Rate} \\
& + \phi_{14} \text{Foreign Cash/Sales} + \phi_{15} \text{Foreign Sales/Sales} \\
& + \phi_{16} \text{Domestic Loss Indicator} + \phi_{17} \text{Mandatory Dividend Score} \\
& + \phi_{18} \text{Corruption Score} + \phi_{19} \text{Infrastructure Score} + \phi_{20} \text{Capital Control Score} \\
& + \Sigma \text{Year, Industry Dummies} + \eta
\end{aligned} \tag{1*}$$

Consistent with H<sub>1b</sub>, we expect a negative coefficient on *HighPre* × *Tax Cost of Repatriating*.

H<sub>2</sub> suggests that financial reporting incentives induce public and private firms to time their repatriations differently throughout the fiscal reporting year. All else equal, we expect public firms to behave differently than private firms in later quarters when public firms presumably have more information regarding the overall earnings. Thus, we expect public firms to be more sensitive to the earnings effect of repatriations later in the year. To investigate whether public and private firms have different repatriation behavior in the fourth quarter, we estimate the following regression using a Tobit procedure:

$$\begin{aligned}
\text{Q4RepPct} = & \alpha + \beta_1 \text{Public} + \beta_2 \text{Tax Cost of Repatriating} \\
& + \beta_3 \text{Public} \times \text{Tax Cost of Repatriating} + \beta_4 \text{Foreign Q4 Prof} \\
& + \beta_5 \text{Log PTI} + \Sigma \text{Year, Industry Dummies} + \varepsilon
\end{aligned} \tag{2}$$

$$\begin{aligned}
\text{Q4RepPct} = & \alpha + \beta_1 \text{Public} + \beta_2 \text{Tax Cost of Repatriating} \\
& + \beta_3 \text{Public} \times \text{Tax Cost of Repatriating} + \beta_4 \text{HighPre} \\
& + \beta_5 \text{HighPre} \times \text{Tax Cost of Repatriating} + \beta_6 \text{Foreign Q4 Prof} \\
& + \beta_7 \text{Log PTI} + \Sigma \text{Year, Industry Dummies} + \varepsilon
\end{aligned} \tag{2*}$$

*Q4RepPct* equals repatriations during the fourth quarter divided by total repatriations during the year. *Foreign Q4 Prof* is fourth quarter foreign net income scaled by foreign sales. H<sub>2</sub> predicts that the effect of repatriation taxes on fourth quarter repatriations is different for public firms relative to private firms. Therefore we expect that the coefficient on *Public* × *Tax Cost of Repatriating* is significantly different from zero. H<sub>2</sub> also predicts that the magnitude of this effect is greater for

public firms with high amounts of PRE. Therefore we expect the coefficient on *HighPre* × *Tax Cost of Repatriating* to be significantly different from zero in the same direction at the coefficient on *Public* × *Tax Cost of Repatriating*.

Finally, we evaluate the association between repatriation decisions and investment activity of the firms in our sample. Although we surmise that capital market pressures can lead to predictable differences between repatriations of public and private firms, our results could still be attributable to varying investment opportunities. Generally, we expect that firms will repatriate when investment opportunities in the U.S. dominate those available abroad (Hartman 1985). However, to the extent that public companies face incremental costs to repatriating, we conjecture that these costs will result in a weaker link between repatriation decisions and investment activity. If firms are reluctant to recognize tax costs in their financial statements, all else equal, H<sub>3a</sub> suggests that the association between repatriation decisions and new investment will be lower for public firms than for private firms. H<sub>3b</sub> suggests that the magnitude of this effect will be higher for public firms with high amounts of permanently reinvested earnings than for other public firms. To investigate these hypotheses we study the association between current repatriations and domestic investment and the association between current unremitted foreign earnings and foreign investment. Specifically, to investigate H<sub>3a</sub> and H<sub>3b</sub>, we estimate the following models using a Tobit procedure:

$$\begin{aligned}
 \text{Next Year's Domestic Investment/Sales} = & \alpha + \beta_1 \text{Repatriations/Sales} + \beta_2 \text{Public} \\
 & + \beta_3 \text{Public} \times \text{Repatriations/Sales} + \beta_4 \text{HighPre} \\
 & + \beta_5 \text{HighPre} \times \text{Repatriations/Sales} + \beta_6 \text{Foreign Prof} \\
 & + \beta_7 \text{Domestic Prof} + \beta_8 \text{Log PTI} + \beta_9 \text{Tax Cost of Repatriating} \\
 & + \beta_{10} \text{Domestic Debt/Equity} + \beta_{11} \text{Foreign Debt/Equity} \\
 & + \beta_{12} \text{Domestic Interest Rate} + \beta_{13} \text{Foreign Interest Rate} \\
 & + \beta_{14} \text{Foreign Cash/Sales} + \beta_{15} \text{Foreign Sales/Sales} \\
 & + \beta_{16} \text{Domestic Loss Indicator} + \beta_{17} \text{Mandatory Dividend Score} \\
 & + \beta_{18} \text{Corruption Score} + \beta_{19} \text{Infrastructure Score} + \beta_{20} \text{Capital Control Score} \\
 & + \Sigma \text{Year, Industry Dummies} + \eta
 \end{aligned} \tag{3}$$

$$\begin{aligned}
\text{Next Year's Foreign Investment/Sales} = & \alpha + \beta_1 \text{Unremitted Current Earnings/Sales} \\
& + \beta_2 \text{Public} + \beta_3 \text{Public} \times \text{Unremitted Current Earnings/Sales} + \beta_4 \text{HighPre} \\
& + \beta_5 \text{HighPre} \times \text{Unremitted Current Earnings/Sales} + \beta_6 \text{Foreign Prof} \\
& + \beta_7 \text{Domestic Prof} + \beta_8 \text{Log PTI} + \beta_9 \text{Tax Cost of Repatriating} \\
& + \beta_{10} \text{Domestic Debt/Equity} + \beta_{11} \text{Foreign Debt/Equity} \\
& + \beta_{12} \text{Domestic Interest Rate} + \beta_{13} \text{Foreign Interest Rate} \\
& + \beta_{14} \text{Foreign Cash/Sales} + \beta_{15} \text{Foreign Sales/Sales} \\
& + \beta_{16} \text{Domestic Loss Indicator} + \beta_{17} \text{Mandatory Dividend Score} \\
& + \beta_{18} \text{Corruption Score} + \beta_{19} \text{Infrastructure Score} + \beta_{20} \text{Capital Control Score} \\
& + \Sigma \text{Year, Industry Dummies} + \eta
\end{aligned} \tag{3*}$$

*Next Year's Domestic Investment/Sales* is domestic capital expenditures and R&D at time t+1 scaled by total domestic and foreign sales. *Next Year's Foreign Investment/Sales* is foreign capital expenditures and R&D at time t+1 scaled by total domestic and foreign sales. All other variables in Equations (3) and (3\*) are defined as in Equation (1). Our variable of interest in Equations (3) and (3\*) are the interaction terms, *Public×Repatriations/Sales* and *HighPre×Repatriations/Sales* and *Public×Unremitted Current Earnings/Sales* and *HighPre×Unremitted Current Earnings/Sales*, respectively. If public firms face additional costs to repatriation, we expect  $\beta_3$  and  $\beta_5$  to be negative.

## 5. Results

### 5.1 BEA Descriptive Statistics

Table 2 provides descriptive statistics for our BEA sample of 611 firms from 1999 through 2004. From this balanced panel we eliminate 157 firm-years in which the accumulated foreign pre-tax earnings of the parent-affiliate group are negative and another 233 firm-years in which we do not have all of the required regression variables for our multivariate analyses resulting in a sample of 3,276 firm-years. We report all statistics using the aggregate parent-affiliate group (i.e., the domestic U.S. parent plus majority-owned foreign affiliates). We show statistics for both the entire sample and private and public firms separately. Continuous measures are winsorized at the top

and bottom 1 percent, and all tax rate measures are winsorized to fall between 0 and 100 percent. Finally, due to confidentiality restrictions, medians reported in the table (Median5) represent the mean of the five middle observations.

The mean return on sales, *Prof*, is 3.93 percent for private firms and 3.00 percent for public firms suggesting that private firms are more profitable than public firms. *Domestic Prof* and *Foreign Prof* confirm that the higher overall profitability observed in private firms is due to both domestic and foreign operations. However, public firms are much larger than private firms in terms of number of affiliates and total sales. *Affiliates* is the number of affiliates in the parent-affiliate group. Private firms have 8.99 affiliates on average whereas public firms have 23.25 affiliates on average. Mean *Domestic (Foreign) Sales* are \$1.87 billion (\$777 million) for private firms and \$5.99 billion (\$3.10 billion) for public firms. Although profitability and size vary considerably across public and private firms, the tax rate measures are more similar. Note that there is no statistically significant difference between the mean *U.S. Taxes on Repatriations* for private and public firms (11.20 and 10.46 percent, respectively) or the *Current Affiliate Tax Rate* (24.28 versus 26.40 percent, respectively).

Measures of domestic and foreign leverage (*Debt/Equity*) suggest that private firms use more foreign debt relative to public firms (2.42 versus 1.75 respectively), while public firms use more domestic debt relative to private firms (0.83 versus 0.62 respectively). Consistent with private firms favoring foreign debt, they report a lower cost of borrowing abroad relative to public firms (4.21 versus 5.08 percent, respectively). Interestingly, there is no statistically significant difference in domestic interest rates – yet public firms use more domestic debt - suggesting that public firms use more domestic debt because foreign earnings are trapped abroad consistent with our hypotheses above. *Foreign Sales/Sales* reveals that foreign operations are sizable for both public (28.44 percent) and private (30.42 percent) firms. Public and private firms have equal

realizations of negative pre-tax income in their domestic operations (*Domestic Loss Indicator* equals approximately 19 percent for both types of firms).

For our sample of public firms, we capture the amount of permanently reinvested earnings abroad. Table 2 shows that the median firm designates 15.80 percent of total unremitted foreign earnings as PRE. Additionally, some public firms report that 100 percent of their unremitted foreign earnings are PRE (mean *HighPre* is 5.97 percent). Because a nontrivial portion of foreign operations are in low tax countries, this result suggests that some public firms have significant unrecorded tax liabilities in their financial statements. In terms of repatriation activity, Table 2 shows no statistically significant difference in the amount repatriated (*Repatriations/Sales*) between public and private firms. This result is interesting given that we expect public firms to repatriate less than private firms and private firms are likely to have more limited access to capital than public firms. In our multivariate analysis, we formally test for differences in repatriation behavior after controlling for profitability, capital structure, and the amount of permanently reinvested earnings.

## 5.2 *Public versus Private Analysis*

In Table 3, we report the results of estimating Equation (1) using the parent-affiliate group as our unit of measurement. Table 3 Column (1) provides estimates of the model using *Tax Cost of Repatriating* (35 percent minus *BKR Tax Rate*) as a proxy for the potential tax liability on repatriations. As expected, and consistent with existing research, we find a negative coefficient on the tax measure (-0.0198;  $p < .01$ ). When we add *Public* and *Public x Tax Cost of Repatriating*, we find that *Tax Cost of Repatriating* becomes insignificant suggesting that private firms are not as sensitive to the tax cost of repatriation as public firms. The coefficient on *Public* is not significantly different from zero suggesting that public companies with smaller incremental U.S. tax liabilities on repatriation are no less likely to repatriate, on average, than private companies. Consistent with

H<sub>1a</sub>, the interaction between *Public* and *Tax Cost of Repatriating* is negative and significant (-0.0259; p<.05) suggesting that public firms are more sensitive to the tax cost of repatriation than private firms.<sup>14</sup> In Column (3), we re-estimate Equation (1) incorporating controls for non-tax reasons to repatriate. Results are qualitatively similar to those in Column (2), as the interaction between *Public* and *Tax Cost of Repatriating* is negative and significant (-0.0323; p<.05). Of the financing and capital structure control variables, only *Domestic Debt/Equity* is significant. The coefficient on *Domestic Debt/Equity* is positive and significant (0.0005; p<.01) suggesting that firms repatriate foreign earnings to service high levels of domestic debt. *Foreign Sales/Sales*, *Domestic Loss Indicator*, *Mandatory Dividend Score*, and *Capital Control Score* variables are significant in the expected direction. We interpret the positive coefficient on *Foreign Sales/Sales* as suggesting that firms with a large multinational presence have a greater ability to mitigate repatriation taxes leading to greater repatriations.

In Table 3 Column (4), we report the results of estimating equation (1\*) which incorporates our direct measure of financial reporting costs, *HighPre*, and its interaction with *Tax Cost of Repatriating*. Similar to Column (3) the coefficient on *Public x Tax Cost of Repatriating* is negative and significant (-0.0231; p<.10). Additionally, consistent with H<sub>1b</sub>, the coefficient on *HighPre x Tax Cost of Repatriating* is negative and significant (-0.0609; p<.05). In Column (5), the negative and significant coefficients on *Public x Tax Cost of Repatriating* and *HighPre x Tax Cost of Repatriating* survive the addition of control variables for non-tax reasons to repatriate. These results suggest that public firms are more sensitive to the tax cost of repatriating than private firms, and this effect

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<sup>14</sup> Desai, Foley and Hines (2007) also consider the notion that public and private companies exhibit different repatriation patterns, although their motivation for doing so is quite different than ours. Specifically, they suggest that the need for domestic resources to pay dividends to common shareholders is higher for public firms and they test whether this need is strong enough to drive repatriation policies. To capture affiliates that do not face the demands of public shareholders, they identify firms not appearing in Compustat based on a match using IRS-issued employer-identification numbers. The authors estimate separate dividend payout equations for Compustat and non-Compustat firms and find no difference in their repatriation behavior.

is exacerbated by the existence of large unrecorded tax liabilities and an inability to repatriate non-PRE foreign earnings.

From an economic perspective, after controlling for financing costs and investment opportunities there should be no reason that a public company would repatriate less relative to a private company simply because of the ability to avoid a tax cost. Both public and private companies benefit from reduced tax costs. Thus, we interpret our results as follows. First, public companies are more likely to value the ability to defer recognition of tax expense on unremitted foreign earnings, which deters repatriation for public firms in general when the tax cost of repatriating is high. Second, public companies with *HighPre* are particularly sensitive to the tax cost of repatriating because they are likely to have significant unrecorded tax liabilities and no flexibility to repatriate non-PRE foreign earnings. This lack of flexibility further deters repatriation of foreign earnings for *HighPre* public firms that face a high tax cost of repatriation. Overall, these results suggest that public and private firms have different repatriation behavior in terms of how they respond to the tax cost of the repatriation, and that this difference is exacerbated by the firm's prior decision to designate unremitted foreign earnings as PRE.

## 5.2 *Quarterly Public versus Private Analysis*

In our quarterly analysis, we continue to operationalize the notion of a financial reporting cost simply as 'being a public firm'. In general, if financial reporting incentives affect repatriation decisions, then public and private firms should exhibit different repatriation patterns because private firms do not face capital market pressures. Table 4 provides univariate statistics for quarterly repatriation activity of private as compared with public firms. The *Repatriation Indicator* is the percentage of parent firms that repatriate earnings from at least one subsidiary during the quarter. This percentage is lower for public firms in every quarter, suggesting that public companies repatriate from their affiliates less often than private companies. However, this finding

could also stem from the fact that public parents have more than double the number of affiliates than private parents (see *Affiliates* in Table 2). When we scale repatriation activity by sales, these differences are largely diminished. Nonetheless, *Repatriations/Sales* does reveal a general pattern of more public company repatriations in the second half of the year and less in the first half of the year relative to private companies. This result is consistent with public firms being more willing to repatriate later in the fiscal year when there is some reduced uncertainty about accounting earnings for the period.

When we consider repatriations from high and low tax affiliates separately, the univariate statistics suggest that public companies repatriate less frequently from low tax affiliates relative to private companies. Again, continuous measures – *Rep\_High* and *Rep\_Low* – reveal a general pattern of steady increases in public company repatriations throughout the year from both high tax and low tax affiliates. In Table 4, Panel B, we investigate the proportion of repatriations occurring in the fourth quarter (*Q4RepPct*). This measure suggests that public firms repatriate more in the fourth quarter than private firms (14.14 versus 10.25 percent, respectively). While the univariate results broadly suggest that public companies repatriate less often than private companies and that public company repatriation activity appears to steadily increase throughout the year, we are interested in the difference between private and public company repatriation behavior and thus use a multivariate analysis to do a more robust comparison.

Table 5 presents multivariate results for of estimating Equations (2) and (2\*) which investigate the quarterly repatriation activity of private compared to public firms and the existence of PRE. The dependent variable is the percent of current year repatriations that occur during the fourth quarter, *Q4RepPct*. In Columns (1) and (2) we investigate whether a higher proportion of public firm repatriations occur in the fourth quarter relative to private firms. Specifically, in Column (2) of Table 5, we find that the coefficient on *Public x Tax Cost of Repatriating* is negative and significant (-1.2052;  $p < .01$ ). This result suggests that public firms repatriate less in the fourth

quarter relative to private firms as the tax cost of repatriating increases. We interpret this result as evidence that as public companies near the close of their fiscal year and have a better assessment of annual earnings, they look for ways to increase reported earnings. By avoiding repatriations from low tax countries (e.g., the tax cost of repatriating is high), public firms can avoid recognition of tax expense.

In Columns (3) and (4) of Table 5, we present the results of estimating equation (2\*) which incorporates a direct measure of the cross-sectional variation in the financial reporting costs of repatriation, *HighPre*. In Column (4) the coefficient on *HighPre* is positive and significant suggesting that firms with large unrecorded tax liabilities repatriate more in the fourth quarter relative to other public firms. However, the coefficient on *HighPre* x *Tax Cost of Repatriating* is negative and significant (-2.53,  $p < 0.01$ ) suggesting that this behavior is mitigated as the tax cost of repatriation increases. As in the annual repatriation analysis in Table 3, *Public* interacted with the *Tax Cost of Repatriating* survives inclusion of *HighPre* and *HighPre* interacted with the *Tax Cost of Repatriating* (-1.11;  $p < 0.01$ ). This result suggests that even public firms that have less than 100 percent of their unremitted earnings designated as PRE are deterred from repatriating earnings in the fourth quarter, but that significant PRE further deters repatriation.

### 5.3 Investment Analyses

In Table 6, we report descriptive statistics for the key variables used in our investment analysis for private firms and for *HighPre* and *LowPre* public firms. *HighPre* public firms make higher domestic investments than *LowPre* and private firms, and less foreign investment than *LowPre* public firms (1.97 versus 2.60, respectively). This finding is inconsistent with the meaning of the designation of foreign earnings as permanently reinvested under APB No. 23. A *HighPre* public firm is declaring its intention to reinvest foreign earnings abroad indefinitely, and thus, should be engaging in higher foreign investment than *LowPre* firms. However, this result is

consistent with the results in Krull (2004) that suggest PRE designations are used to manage earnings. Also, notable is that *HighPre* public firms exhibit the lowest foreign profitability, and *Unremitted Current Earnings/Sales* is not statistically different among the three groups. All of these statistics are inconsistent with the intent of permanently reinvested earnings under APB No. 23. We would expect that firms with 100 percent of their unremitted foreign earnings designated as PRE would be highly profitable abroad, leave more of their earnings abroad, and repatriate less than either *LowPre* public or private firms. Finally, *HighPre* Public firms hold more cash abroad than *LowPre* public firms (3.94 and 3.59 percent of sales, respectively). This result is consistent with the view that unremitted foreign earnings are ‘trapped’ abroad for firms with high financial reporting costs of repatriating.

In Table 7 we report the results of estimating Equations (3) and (3\*) which examine the link between repatriation activity and domestic and foreign investment behavior, respectively. In Panel A, we examine the link between repatriations and one-period ahead domestic investment, while, in Panel B, we examine the link between unremitted current earnings and one-period ahead foreign investment. We do not find support for H<sub>3a</sub> in either the domestic or foreign investment analyses. Specifically, the interaction of *Public* and *Repatriations/Sales* in Column (1) of Panel A is positive and significant (0.2464; p<.10) suggesting that the repatriation of foreign earnings has a higher positive association with domestic investment relative to private firms. In the foreign analysis, Column (1) of Panel B shows that the interaction of *Public* and *Unremitted Current Earnings/Sales* is insignificant, suggesting no statistically significant difference in the association between unremitted foreign earnings and foreign investment for public and private firms. However, we do find support for H<sub>3b</sub> in both the domestic and foreign analyses. Specifically, the interaction of *HighPre* and *Repatriations/Sales* in Column (2) of Panel B is negative and significant (-0.4942; p<.10) suggesting that when *HighPre* public firms repatriate, they do so for non-investment purposes. In other words, we interpret the lower association between repatriations and domestic investment to mean that

the timing of *HighPre* public firm repatriations considers the recognition of tax expense in earnings, rather than time the need for cash to invest in positive net present value domestic projects. In Column (2) of Panel B, the interaction of *HighPre* with *Unremitted Current Earnings/Sales* is negative and significant (-0.0845;  $p < .01$ ). Consistent with the domestic results, this finding suggests a lower association between current period foreign earnings left abroad and foreign investment for *HighPre* public firms. This result is consistent with the overall hypothesis put forth in this paper; that APB No. 23 deters the repatriation of foreign earnings.

## 6. Conclusion

U.S. international tax policy plays a role in the ability of U.S. multinationals (MNCs) to compete in the global marketplace and various opponents of current tax policy argue that it creates incentives for U.S. firms to “park” foreign subsidiary profits in low tax countries, thereby reducing domestic investment. These incentives arise because a tax liability is incurred on repatriations of foreign subsidiary earnings generally equal to the difference between the U.S. tax rate and the average foreign tax rate paid on the repatriated earnings. A factor not yet considered in the empirical literature on repatriation behavior is that financial reporting can also affect repatriation decisions. Accounting policy generally allows firms to delay recognizing the repatriation tax expense in the period in which the earnings are generated. Instead, the expense is recognized in the period that those earnings are repatriated or no longer considered permanently reinvested. Firms under capital market pressure to report higher earnings may have an incentive to delay repatriation to avoid recognizing the tax expense in the financial statements. In this paper, we examine whether the capital market incentive to report higher earnings to shareholders is a factor that affects repatriation behavior and find evidence that financial reporting incentives affect firms’ repatriation decisions. These findings are relevant for both tax policy makers and accounting

standard setters because they suggest that the current accounting for U.S. taxes on foreign subsidiary earnings affects repatriation.

We study repatriation decisions using two proxies for capital market pressures. First, we investigate whether firm ownership – public versus private – influences repatriation behavior. This focus on public versus private firms allows us to separate the cash flow effect of repatriation taxes from the financial reporting effect of repatriation taxes. Second, among public firms, we investigate whether the proportion of unremitted foreign earnings that a firm has designated as PRE influences repatriation decisions. Our results suggest that public firms are more sensitive to the tax cost of repatriation relative to private firms. Additionally, we find support for our conjecture that public firms are more sensitive to the tax cost of repatriating in the last fiscal quarter than private firms. This result further supports the notion that public firms balance the need to manage investor perceptions of firm performance with their need to access the cash abroad. We further find that public firms' that designate most or all of their foreign earnings as PRE are more sensitive to the tax cost of repatriating overall and in the last fiscal quarter, relative to other public firms.

Additionally, we examine the investment behavior of public versus private firms and public firms with high and low amounts of PRE. We find that the association between repatriations and domestic investment is weaker for public firms with high levels of PRE relative to other public firms. Finally, the association between current unremitted foreign earnings and foreign investment is weaker for high PRE firms than for other public firms. Overall, the results of this study provide evidence that the financial reporting costs of dividend remittances deter such repatriations.

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	<b>Figure 1</b>				
	I	II	III	IV	V
	<b>Repatriate current earnings</b>	<b>Do not repatriate current earnings &amp; do not designate as PRE</b>	<b>Do not repatriate current earnings &amp; designate as PRE</b>	<b>Repatriate current &amp; prior earnings previously designated as PRE</b>	<b>Repatriate current &amp; prior earnings not previously designated as PRE</b>
Pre-tax earnings	Recognize current earnings	Recognize current earnings	Recognize current earnings	Recognize current earnings	Recognize current earnings
After-tax earnings	Recognize foreign tax & actual U.S. tax	Recognize foreign tax & expected U.S. tax	Recognize foreign tax	Recognize foreign tax on current earnings & actual U.S. tax on current & prior earnings	Recognize foreign tax on current earnings & actual U.S. tax on current earnings
Total tax	Foreign tax + U.S. tax	Foreign tax	Foreign tax	Foreign tax + U.S. tax'	Foreign tax + U.S. Tax
	<b>Overall Effect</b>				
Pre-tax earnings	High	High	High	High	High
After-tax earnings	Middle	Middle	High	Low	Middle
U.S. tax	Middle	Zero	Zero	High	High

**Total tax** refers to the foreign and residual U.S. income tax paid on foreign earnings. **Foreign tax** refers to the foreign income tax paid to foreign taxing jurisdictions on foreign earnings. **U.S. tax** refers to the residual U.S. tax paid on foreign earnings (U.S. tax' > U.S. tax). **Current and prior earnings** refer to total foreign earnings. **Pre-tax earnings** refers to the pre-tax earnings of the U.S. consolidated entity. **After-tax earnings** refers to the after-tax earnings of the U.S. consolidated entity.

**Table 1**  
**Sample Composition**

**Panel A: Bureau of Economic Analysis**

	Parents	Associated Affiliates
In BEA data between 1999 and 2004	4,840	57,164
Less parents (and associated affiliates) without 6 consecutive years of data	(2,283)	(12,709)
Less parents without 6 consecutive years of affiliate reporting	(1,752)	(11,259)
Less ADRs	(22)	(519)
Less foreign incorporated parents	(32)	(381)
Less banks and insurance companies	(65)	(3,433)
Less public entities not in Compustat for 6 consecutive years	(61)	(1,126)
Less firms whose parents cannot be identified*	(14)	(704)
Total	611	27,032
Private Entities	112	2,246
Public Entities	499	24,786

\* Includes 4 mutual companies, 4 firms that changed status during the sample period (i.e., public to private, foreign ownership to domestic ownership etc) and 6 firms whose parents we could not identify as domestic or foreign owned.

**Table 1 (cont.)**

**Panel B: Compustat Sample**

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	Parents
Domestically incorporated firms in Compustat between 1999 and 2004	10,858
Less parents without 6 consecutive years of data	(5,436)
Less parents without at least one year of foreign activity during the sample period	(3,885)
Less firms not reporting in BEA	(1,058)
Plus firms in BEA but that didn't report any foreign activity during the sample period	76
Less ADRs	(22)
Less banks and insurance companies	(34)
Total	499

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**Table 1 (cont.)**

**Panel C: Industry Composition of Sample**

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	Public	Private
1. Mining and construction	4.6%	Combined
2. Food	4.4%	8.9%
3. Textiles, printing and publishing	11.8%	11.6%
4. Chemicals	8.2%	8.9%
5. Pharmaceuticals	2.2%	Combined
6. Extractive industries	5.2%	8.0%
7. Durable manufacturing	27.9%	24.1%
8. Computers	8.6%	Combined
9. Transportation	5.4%	7.1%
11. Retail	16.2%	11.6%
13. Insurance and real estate	Combined	Combined
14. Services	4.2%	9.8%
15. Other and Combined low reporting industries *	4.2%	9.8%

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\*Any industries with less than five observations are combined with the "Other" category.

**Table 1 (con't)****Panel D: Country Composition By Region**

	<i>Private</i>		<i>Public</i>	
	<i>% of Affiliates</i>	<i>% of Assets</i>	<i>% of Affiliates</i>	<i>% of Assets</i>
North America	18.66%	13.05%	12.66%	15.42%
Central and South America	11.32%	18.79%	12.75%	11.76%
Europe	43.68%	52.27%	46.71%	54.44%
Africa	1.65%	0.43%	2.42%	1.06%
Middle East	1.45%	0.97%	1.68%	0.96%
Asia	23.24%	14.49%	23.80%	16.37%

**Panel E: Top Countries**

	<i>Private</i>		<i>Public</i>	
	<i>% of Affiliates</i>	<i>% of Assets</i>	<i>% of Affiliates</i>	<i>% of Assets</i>
1	Canada	United Kingdom	United Kingdom	United Kingdom
2	United Kingdom	Canada	Canada	Canada
3	Germany	UK Caribbean	Germany	Netherlands
4	Netherlands	Germany	France	Germany
5	Japan	France	Netherlands	Japan
6	Mexico	Netherlands	Mexico	Bermuda
7	Australia	Switzerland	Japan	Switzerland
8	France	Japan	Australia	France
9	Singapore	Australia	Italy	Luxembourg
10	China	Bermuda	Brazil	Mexico

**Table 2**  
**BEA Descriptive Statistics**

Variable	All Observations N = 3276			Private Firms N = 546			Public Firms N = 2730		
	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>
Prof (%)	3.16	3.11	10.95	3.93**	2.60	8.40	3.00	3.20	11.39
Domestic Prof (%)	0.17	2.33	22.20	1.54**	1.94	15.92	-0.11	2.42	23.25
Foreign Prof (%)	8.05	5.02	19.25	9.89**	4.13	23.60	7.68	5.15	18.23
Affiliates	20.87	7.0	44.58	8.99***	3.0	23.66	23.25	9.0	47.32
High Tax Affiliates	3.46	1.0	5.86	1.61***	1.0	2.48	3.84	2.0	6.26
Log PTI	12.94	12.75	1.54	11.69***	11.61	1.38	13.19	13.09	1.49
Domestic Sales	5,311,054	1,469,236	13,641,743	1,879,427***	594,034	4,866,918	5,997,380	1,815,979	14,689,197
Foreign Sales	2,713,314	435,953	11,000,623	777,212***	157,181	2,808,660	3,100,535	541,525	11,947,802
OTPR Tax Rate (%)	30.48	30.57	4.81	31.68***	31.68	4.98	30.24	30.39	4.73
DFH Tax Rate (%)	26.10	26.59	6.61	27.21***	27.85	7.46	25.88	26.32	6.40
BKR Tax Rate (%)	23.83	25.33	10.31	24.61*	27.90	10.64	23.68	24.86	10.24
Current Affiliate Tax Rate (%)	26.04	23.33	22.63	24.28	20.18	21.94	26.40	23.50	22.75

Variable	All Observations N = 3276			Private Entities N = 546			Public Entities N = 2730		
	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>
Repatriations/Sales (%)	0.91	0	2.17	0.96	0	2.50	0.90	0	2.09
Affiliate Repatriation %	14.72	3.11	22.23	17.36***	0	27.97	14.19	4.24	20.86
Parent Repatriation %	51.74	1.00	49.98	43.04***	0	49.56	53.48	1.00	49.89
Foreign Tax Credit on Repatriations (%)	28.08	23.78	198.99	20.73	24.12	35.99	29.30	23.03	214.44
U.S Taxes on Repatriations (%)	10.78	8.21	10.89	11.20	8.18	12.33	10.46	8.21	10.51
High Tax PTI/Sales (%)	23.13	76.96	975.17	8.09	64.50	89.29	25.61	78.85	1,052.03
Low Tax PTI/Sales (%)	11.94	94.56	3,391.84	3.54	69.66	25.14	13.49	99.34	3,692.03
Foreign Debt/Equity	1.86	0.90	3.37	2.42***	0.86	4.59	1.75	0.90	3.05
Domestic Debt/Equity	0.79	0.38	2.19	0.62**	0.33	1.79	0.83	0.39	2.27
Domestic Interest Rate (%)	7.91	5.45	12.03	7.34	5.20	11.88	8.02	5.52	12.06
Foreign Interest Rate (%)	4.93	3.26	9.61	4.21*	3.56	6.10	5.08	3.16	10.16
Foreign Cash/Sales (%)	3.38	1.34	6.58	2.25***	0.88	4.61	3.61	1.48	6.89

Variable	All Observations N = 3276			Private Entities N = 546			Public Entities N = 2730		
	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>	<u>Mean</u>	<u>Median5</u>	<u>Std Deviation</u>
Foreign Sales/Sales (%)	30.08	27.38	19.86	28.44**	24.48	19.94	30.42	28.14	19.83
Corruption Score	66.12	67.51	20.58	67.22	70.12	25.95	65.90	67.29	19.32
Infrastructure Score	54.96	56.42	18.92	55.98	57.57	23.71	54.75	56.22	17.80
Mandatory Dividend Score	1.72	0	3.81	1.06***	0	3.46	1.86	0	3.86
Capital Control Score	5.23	0	10.53	4.59	0	11.59	5.36	0	10.31
Domestic Loss Indicator	18.77	0	39.06	18.86	0	39.16	18.75	0	3.86
PRE/Unremitted Foreign Earnings (%)	N/A	N/A	N/A	N/A	N/A	N/A	26.23	15.80	30.74
HighPre	N/A	N/A	N/A	N/A	N/A	N/A	5.97	0	23.70
Affiliates Indirectly-Owned (%)	20.17	2.07	26.12	11.03***	0	20.57	21.20	9.09	26.72

This table reports firm attributes using data reported on the Bureau of Economic Analysis Survey Form 10, Form 11 and Form 577 from 1999 to 2004. See Section 3 of the paper for BEA Survey details. Private Firms are parent-affiliate groups whose parents are privately owned as described in the Lexis Nexis Corporate Affiliations database. Public Firms are parent-affiliate groups whose parents are listed on a U.S. stock exchange. Median5 represents the average of the five median observations. We report all statistics using the aggregate parent-affiliate group (i.e., the domestic U.S. parent plus all majority-owned foreign affiliates). *Prof* is the profit margin for the aggregate parent-affiliate group (i.e., domestic net income + foreign net income/domestic sales + foreign sales). *Domestic Prof* is domestic net income/domestic sales. *Foreign Prof* is foreign net income/foreign sales. *Affiliates* is the total number of affiliates in a parent-affiliate group. *High Tax Affiliates* is the total number of affiliates in a parent-affiliate group with a foreign tax credit rate of greater than or equal to 30% using *BKR Tax Rate* (defined below). *Log PTI* is the log of accumulated foreign pre-tax earnings. *Domestic Sales* are total domestic sales (in millions). *Foreign Sales* are total foreign sales (in millions). *OTPR Tax Rate* is the affiliates' home country reported maximum statutory tax rate as provided by the Office of Tax Policy Research. *DFH Tax Rate* is the median of all affiliate tax rates for all U.S. affiliates operating in a country-year as described in Desai, Foley and Hines (2001). *BKR Tax Rate* is the U.S. parent's creditable taxes upon repatriation estimated using aggregate foreign taxes paid on unremitted foreign earnings of all affiliates in a group over aggregate unremitted pre-tax foreign earnings of all affiliates in a group. 35 percent minus *BKR Tax Rate* is the *Tax Cost of Repatriating* measure used in the multivariate analysis. *Average Current Affiliate Tax Rate* is current period foreign income taxes paid over foreign pre-tax income (i.e., foreign net income + foreign income taxes) for all affiliates in a group. *Repatriations/Sales* are dividends remitted from majority-owned foreign affiliates as reported on the BEA Quarterly survey scaled by total foreign and domestic sales. *Affiliate Repatriation %* is the proportion of affiliates in a group that pay dividend to the U.S. parent. *Parent Repatriation %* is the proportion of parents that repatriate from at least one of their foreign affiliates. *Foreign Tax Credit on Repatriations* is the estimated foreign taxes paid on actual repatriated earnings stated as a percentage of the pre-tax repatriated earnings. *U.S. Taxes on Repatriations* is the estimated incremental U.S. taxes owned upon actual repatriations stated as a percentage of the pre-tax repatriated earnings calculated as the difference between the U.S. statutory tax rate and the *BKR Tax Rate*. *High (Low) Tax PTI/Sales* is affiliate pre-tax income scaled by sales reported in jurisdictions whose *BKR Tax Rate* is greater than or equal to 30% (less than 30%). *Foreign Debt/Equity* is the ratio of foreign short-term and long-term debt over foreign equity. *Domestic Debt/Equity* is the ratio of domestic short-term and long-term debt over domestic equity. *Domestic Interest Rate* is the ratio of domestic interest paid over domestic short-term and long-term debt. *Foreign Interest Rate* is the ratio of foreign interest paid over foreign short-term and long-term debt. *Foreign Cash/Sales* is the ratio of foreign cash to domestic and foreign sales. *Foreign Sales/Sales* is the ratio of foreign sales to the parent-affiliate groups' total domestic and foreign sales. *Mandatory Dividend* equals one if the country requires dividends to be paid to shareholders, and zero otherwise. *Corruption Score* is a one to ten scoring of the relative level of corruption in the country. High scores represent lower levels of corruption. *Infrastructure Score* is a one to ten scoring (with 10 representing the best infrastructure) of the quality of the country's infrastructure. *Capital Control* is equal to one if the country restricts firms' ability to take funds out of the country, and zero otherwise. Each of these four country-level measures (*Mandatory Dividend*, *Corruption Score*, *Infrastructure Score* and *Capital Control*) are first determined at the affiliate level, and then we develop parent-level scores by averaging across all affiliates. *Domestic Loss Indicator* equals one if the parent reports a domestic pre-tax loss, zero otherwise. *PRE/Unremitted Foreign Earnings Designated* is the ratio of permanently reinvested earnings public companies reported in the 10-K to total unremitted foreign earnings. *HighPre* equals 1 if year t-1 *PRE/Unremitted Foreign Earnings Designated* is 1 or greater, zero otherwise. *% of Affiliates Indirectly-Owned* is the ratio of affiliates whose direct ownership is less than 50 percent to the total number of affiliates with a parent-affiliate group.

\*, \*\*, \*\*\* public and private firms are significantly different at the 10%, 5% and 1% two-tailed level, respectively

**Table 3**  
**Annual Repatriation Behavior of Public and Private Firms**

	Dependent Variable = Repatriations/Sales				
	(1)	(2)	(3)	(4)	(5)
Intercept	-0.0721*** (0.0038)	-0.0735*** (0.0039)	-0.0679*** (0.0056)	-0.0733*** (0.0040)	-0.0675*** (0.0056)
Foreign Prof	0.0138*** (0.0029)	0.0131*** (0.0029)	0.0177*** (0.0030)	0.0133*** (0.0029)	0.0178*** (0.0030)
Domestic Prof	-0.0003 (0.0024)	-0.0005 (0.0024)	-0.0011 (0.0027)	-0.0001 (0.0025)	-0.0006 (0.0027)
Log PTI	0.0049*** (0.0003)	0.0052*** (0.0003)	0.0045*** (0.0003)	0.0052*** (0.0003)	0.0045*** (0.0003)
Lagged Repatriations	0.6722*** (0.0249)	0.6648*** (0.0249)	0.6234*** (0.0255)	0.6643 (0.0249)	0.6213*** (0.0255)
Tax Cost of Repatriating	-0.0198*** (0.0055)	0.0011 (0.0125)	0.0125 (0.0130)	0.0011 (0.0125)	0.0126 (0.0130)
Public		-0.0023 (0.0021)	-0.0013 (0.0022)	-0.0025 (-1.19)	-0.0017 (0.0022)
Public × Tax Cost of Repatriating		-0.0259** (0.0136)	-0.0323** (0.0141)	-0.0231* (0.0137)	-0.0288** (0.0141)
HighPre				0.0054 (0.0041)	0.0082** (0.0041)
HighPre × Tax Cost of Repatriating				-0.0609** (0.0288)	-0.0810*** (0.0290)
Domestic Debt/Equity			0.0005*** (0.0002)		0.0005*** (0.0002)
Foreign Debt/Equity			0.0000 (0.0002)		0.0000 (0.0002)
Domestic Interest Rate			0.0005 (0.0045)		0.0000 (0.0045)



Foreign Interest Rate			-0.0024 (0.0061)		-0.0028 (0.0061)
Foreign Cash/Sales			-0.0033 (0.0089)		-0.0035 (0.0089)
Foreign Sales/Sales			0.0213*** (0.0032)		0.0215*** (0.0032)
Domestic Loss Indicator			-0.0039** (0.0016)		-0.0040** (0.0016)
Mandatory Dividend Score			0.0321** (0.0142)		0.0322** (0.0142)
Corruption Score			-0.0073 (0.0077)		-0.0075 (0.0077)
Infrastructure Score			0.0074 (0.0084)		0.0073 (0.0084)
Capital Control Score			-0.0104* (0.0060)		-0.0110** (0.0060)
Scale	0.0263*** (0.0005)	0.0262*** (0.0005)	0.0258*** (0.0005)	0.0262*** (0.0005)	0.0258 (0.0005)
Year Fixed Effects	No	No	Yes	No	Yes
Industry Fixed Effects	No	No	Yes	No	Yes
Log Likelihood	2960.79	2968.23	3038.87	2970.60	3042.92
N	3,276	3,276	3,276	3,276	3,276

\*, \*\*, \*\*\* significant at the 10%, 5% and 1% two-tailed level, respectively. Standard errors are reported in parentheses.

See Table 2 for variable definitions.

**Table 4**  
**Quarterly Repatriation Behavior**

**Panel A: Univariate Analysis of Public versus Private Quarterly Repatriation Behavior**

		Repatriation Indicator (%)	Repatriations /Sales (%)	QTR Prof (%)	Rep_High (%)	Rep_Low (%)
ALL						
N = 3276	QTR1	4.409***	0.105	6.038**	0.038	0.067
	QTR2	4.804***	0.113**	6.508***	0.039	0.074***
	QTR3	4.639	0.117	7.471*	0.035***	0.082
	QTR4	5.437***	0.189	6.359	0.047***	0.142
Private						
N = 546	QTR1	5.765	0.110	8.303	0.033	0.077
	QTR2	6.660	0.137	9.314	0.033	0.104
	QTR3	4.817	0.117	9.467	0.019	0.098
	QTR4	7.173	0.175	8.336	0.025	0.150
Public						
N=2730	QTR1	4.138	0.104	5.586	0.039	0.065
	QTR2	4.432	0.108	5.946	0.041	0.067
	QTR3	4.602	0.117	7.071	0.038	0.079
	QTR4	5.089	0.192	5.963	0.052	0.140

\*, \*\*, \*\*\* public and private firms are significantly different at the 10%, 5% and 1% two-tailed level, respectively

This table reports firm attributes using data reported on the Bureau of Economic Analysis Survey Form 577 from 1999 to 2004. See Section 3 of the paper for BEA Survey details. We report all statistics using the aggregate parent-affiliate group (i.e., the domestic U.S. parent plus all majority-owned foreign affiliates). *Repatriation Indicator* is equal to 1 if an affiliate repatriates foreign earnings during the quarter; zero otherwise. *Repatriations/Sales* is repatriated foreign earnings scaled by total annual domestic and foreign sales. *QTR Prof* is foreign quarterly net income scaled by one fourth of foreign annual sales. *Rep\_High(Low)* is repatriated foreign earnings from high tax affiliates scaled by total annual domestic and foreign sales. A high (low) tax affiliate is one whose *BKR Tax Rate* (See Table 2) is greater than or equal to 30% (less than 30%).

**Table 4 (continued)**

**Panel B: Descriptive Statistics for Dependant Variable in Quarterly Multivariate Analysis**

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	Mean	Median5	StdDev
Private N = 546	10.25%	0.00%	25.22%
Public N = 2730	14.14%***	0.00%	27.33%

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\*, \*\*, \*\*\* significantly different from the private sample at the 10%, 5% and 1% two-tailed level, respectively.

*Q4RepPct* is defined as the ratio of repatriations in the fourth quarter to the sum of repatriations in all four quarters.

**Table 5**  
**Quarterly Repatriation Behavior of Public and Private Firms**

	(1)	(2)	(3)	(4)
Intercept	-2.5951*** (0.1161)	-2.4734*** (0.1361)	-2.5958*** (0.1170)	-2.4736*** (0.1366)
Public	-0.0268 (0.0577)	-0.0164 (0.0583)	-0.0369 (0.0579)	-0.0304 (0.0585)
Tax Cost of Repatriating	0.1741 (0.3312)	0.5385 (0.3412)	0.1714 (0.3307)	0.5388 (0.3404)
Public × Tax Cost of Repatriating	-0.9525*** (0.3634)	-1.2052*** (0.3743)	-0.869** (0.3640)	-1.1115*** (0.3744)
HighPre			0.2137** (0.1061)	0.3004*** (0.1065)
HighPre × Tax Cost of Repatriating			-2.12*** (0.8281)	-2.53*** (0.8421)
Foreign Q4 Prof	0.0393 (0.0405)	0.0773** (0.0405)	0.0426 (0.0405)	0.0807** (0.0405)
Log PTI	0.1791*** (0.0081)	0.1783*** (0.0086)	0.1792*** (0.0082)	0.1789*** (0.0087)
Scale	0.5994*** (0.0156)	0.5878*** (0.0152)	0.5984*** (0.0155)	0.5865*** (0.0152)
Year Fixed Effects	No	Yes	No	Yes
Industry Fixed Effects	No	Yes	No	Yes
Log Likelihood	-1811.19	-1741.34	-1807.68	-1736.13
N	3,276	3,276	3,276	3,276

\*, \*\*, \*\*\* significant at the 10%, 5% and 1% two-tailed level, respectively. Standard errors are reported in parentheses. See Tables 2 and 4 for variable definitions.

**Table 6**  
**BEA Descriptive Statistics**  
**Investment Analysis**

	Private Firms N = 546			Public Firms - LowPre N = 2587			Public Firms - HighPre N = 143		
	Mean	Median5	Std Deviation	Mean	Median5	Std Deviation	Mean	Median5	Std Deviation
Domestic Investment/Sales (%)	4.62*\$	3.22	4.96	6.56\$	4.21	7.29	7.97	4.83	7.93
Foreign Investment/Sales (%)	1.51*	0.55	2.60	2.16\$	1.10	3.28	1.97	0.82	3.12
Domestic Prof (%)	1.54*	1.94	15.92	-0.38\$	2.32	23.23	4.77	4.61	23.07
Foreign Prof (%)	9.89*\$	4.13	23.60	7.74\$	5.13	18.42	6.73	5.99	14.44
Unremitted Current Earnings/Sales (%)	1.10	0.48	4.36	1.17	0.67	4.11	1.54	0.71	4.29
Repatriations/Sales (%)	0.96\$	0	2.50	0.92	0.02	2.13	0.52	0	1.19
Log PTI	11.69*	11.61	1.67	13.27\$	13.19	2.00	11.73	11.56	1.46
Tax Cost of Repatriating (%)	11.20\$	8.18	12.33	11.74	8.37	10.51	8.66	3.44	9.62
Domestic Debt/Equity	0.62*\$	0.33	1.79	0.81\$	0.40	2.18	1.12	0.27	3.43
Foreign Debt/Equity	2.42*	0.86	4.59	1.73\$	0.90	3.03	2.03	0.92	3.39
Domestic Interest Rate (%)	7.34	5.20	11.88	7.97	5.49	11.95	8.99	5.93	13.99
Foreign Interest Rate (%)	4.21*	3.56	6.10	5.13\$	3.15	10.35	4.19	3.26	5.57
Foreign Cash/Sales (%)	2.25*\$	0.88	4.61	3.59\$	1.48	6.90	3.94	1.46	6.70

\* significantly different from the LowPre Public sample at the 5% two-tailed level, respectively

\$ significantly different from the HighPre Public sample at the 5% two-tailed level, respectively

This table reports firm attributes using data reported on the Bureau of Economic Analysis Survey Form 10, Form 11 and Form 577 from 1999 to 2004. See Section 3 of the paper for BEA Survey details. Private Firms are parent-affiliate groups whose parents are privately owned as described in the Lexis Nexis Corporate Affiliations database. Public Firms - HighPre (LowPre) are parent-affiliate groups whose parents are listed on a U.S. stock exchange and whose year t-1 ratio of *PRE/Unremitted Foreign Earnings* (as defined in Table 2) is 1 or greater (less than 1). Median5 represents the average of the five median observations. We report all statistics using the aggregate parent-affiliate group (i.e., the domestic U.S. parent plus all majority-owned foreign affiliates). *Domestic Investment/Sales* is domestic capital expenditures and R&D scaled by domestic and foreign sales. *Foreign Investment/Sales* is foreign capital expenditures and R&D scaled by domestic and foreign sales. *Unremitted Current Earnings/Sales* is current period foreign earnings less the current period dividend scaled by domestic and foreign sales. All other variables are defined in Table 2.

**Table 7**  
**Analysis of Public versus Private Investment Activity**

**Panel A: Domestic Investment**

	Dependent Variable = Next Year's Domestic Investment/Sales	
	(1)	(2)
Intercept	0.0505*** (0.0109)	0.0488*** (0.0109)
Repatriations/Sales	-0.1294 (0.1237)	-0.1289 (0.1235)
Public	0.0135*** (0.0034)	0.0125*** (0.0034)
Public x Repatriations/Sales	0.2465* (0.1383)	0.2729** (0.1389)
HighPre		0.0151*** (0.0058)
HighPre x Repatriations/Sales		-0.4942* (0.2739)
Foreign Prof	0.0000 (0.0002)	0.0001 (0.0002)
Domestic Prof	0.0200*** (0.0053)	0.0201*** (0.0053)
Log PTI	-0.0010 (0.0007)	-0.0010 (0.0007)
Tax Cost of Repatriating	0.0298*** (0.0115)	0.0290*** (0.0115)
Domestic Debt/Equity	-0.0016*** (0.0005)	-0.0016*** (0.0005)
Foreign Debt/Equity	-0.0007** (0.0004)	-0.0007** (0.0004)
Domestic Interest Rate	-0.0265*** (0.0095)	-0.0270*** (0.0095)
Foreign Interest Rate	0.0127 (0.0117)	0.0140 (0.0117)

Foreign Cash/Sales	0.1692*** (0.0191)	0.1675*** (0.0191)
Foreign Sales/Sales	-0.0352*** (0.0066)	-0.0354*** (0.0066)
Domestic Loss Indicator	0.0031 (0.0030)	0.0032 (0.0030)
Mandatory Dividend Score	0.0118 (0.0306)	0.0121 (0.0306)
Corruption Score	-0.454*** (0.0140)	-0.0435*** (0.0140)
Infrastructure Score	0.0682*** (0.0154)	0.0665*** (0.0154)
Capital Control Score	0.0213* (0.0113)	0.0211* (0.0113)
Scale	0.0631*** (0.0008)	0.0258*** (0.0008)
Year Dummies	YES	YES
Industry Dummies	YES	YES
Log Likelihood	4286.83	4290.91
N	3,259	3,259

\*, \*\*, \*\*\* significant at the 10%, 5% and 1% two-tailed level, respectively. Standard errors reported in parentheses. See Tables 2 and 6 for variable definitions.

**Panel B: Foreign Investment**

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Dependent Variable = Next Year's Foreign  
Investment/Sales

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	(1)	(2)
Intercept	0.0036 (0.0046)	0.0030 (0.0046)
Unremitted Current Earnings/Sales	-0.0004 (0.0094)	-0.0012 (0.0094)
Public	0.0038*** (0.0014)	0.0035*** (0.0014)
Public x Unremitted Current Earnings/Sales	0.0582*** (0.0148)	0.0756*** (0.0159)
HighPre		0.0025 (0.0024)
HighPre x Unremitted Current Earnings/Sales		-0.0845*** (0.0296)
Foreign Prof	0.0000 (0.0001)	0.0000 (0.0001)
Domestic Prof	-0.0072*** (0.0023)	-0.0081*** (0.0023)
Log PTI	-0.0003 (0.0003)	-0.0003 (0.0003)
Tax Cost of Repatriating	-0.0117** (0.0050)	-0.0122** (0.0050)
Domestic Debt/Equity	-0.0005** (0.0002)	-0.0005** (0.0002)
Foreign Debt/Equity	-0.0002 (0.0002)	-0.0002 (0.0002)
Domestic Interest Rate	0.0112*** (0.0040)	0.0112*** (0.0040)

Foreign Interest Rate	0.0142*** (0.0051)	0.0142*** (0.0051)
Foreign Cash/Sales	0.0721*** (0.0082)	0.0688*** (0.0082)
Foreign Sales/Sales	0.0448*** (0.0028)	0.0445*** (0.0028)
Domestic Loss Indicator	-0.0012 (0.0013)	-0.0013 (0.0013)
Mandatory Dividend Score	0.0005 (0.0137)	0.0004 (0.0137)
Corruption Score	0.0034 (0.0060)	0.0035 (0.0060)
Infrastructure Score	-0.0031 (0.0066)	-0.0032 (0.0066)
Capital Control Score	0.0544*** (0.0049)	0.0548*** (0.0049)
Scale	0.0270*** (0.0003)	0.0270*** (0.0003)
Year Dummies	YES	YES
Industry Dummies	YES	YES
Log Likelihood	6820.78	6824.92
N	3,259	3,259

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\*, \*\*, \*\*\* significant at the 10%, 5% and 1% two-tailed level, respectively. Standard errors are reported in parentheses. See Tables 2 and 6 for variable definitions.