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Jennifer L. Blouin
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The Wharton School
University of Pennsylvania

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Jennifer L. Blouin
The University of Pennsylvania

Linda K. Krull
University of Oregon

Leslie A. Robinson
Tuck School of Business at Dartmouth

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ABSTRACT

This study finds evidence to suggest that public-company reporting by U.S. multinational corporations (MNCs) creates disincentives to repatriate foreign earnings. Firms that operate under both U.S. international tax laws and accounting rules potentially face two costs when they repatriate foreign earnings: an actual cash tax liability and a reduction in reported accounting earnings. Using a confidential dataset of financial and operating characteristics of the foreign affiliates of MNCs combined with public company data over a six year period, we find evidence that capital market incentives have a negative effect on the amount of foreign earnings repatriated by MNCs. This is the first empirical study of actual dividend payments to show that financial reporting is an important non-tax factor in repatriation decisions of multinational firms.

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 tax policy in the U.S. argue that the international tax system has a negative effect on the competitiveness of U.S. firms and creates incentives for multinational firms to park foreign affiliate 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 distributed ("repatriated") to the U.S. parent. As of 2002, MNCs held an estimated $639 billion of undistributed earnings 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"), which temporarily reduced the tax rate on certain eligible repatriations of foreign earnings, was unexpectedly high. Empirical research documents 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 observed six fold increase in repatriations in response to the legislation. The authors conjecture that prior literature has underestimated the efficiency losses caused by the U.S. system of taxing foreign earnings. The documented pool of large amounts of undistributed earnings coupled with the overwhelming corporate response to the AJCA provides the impetus for our analysis.

In this study, we bring a financial reporting perspective into an international tax context to examine the role of a non-tax factor, capital market pressure, in the repatriation decisions of multinational firms. 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. Specifically, we investigate whether capital market incentives to increase earnings explain cross-sectional variation in repatriation behavior.

Tax law dictates the amount and timing of MNCs' cash payments for any U.S. tax due upon repatriation ("repatriation tax"). A MNC pays a repatriation tax on foreign earnings when the earnings are remitted as a dividend to the U.S. parent. The amount of tax due is the dividend grossed-up for foreign taxes paid times the U.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. Thus, if the foreign tax rate is greater than the U.S. tax rate, the MNC owes no incremental U.S. tax on repatriated earnings. Further, if a MNC repatriates earnings from more than one country, it can use credits generated from high tax affiliates to offset U.S. taxes on repatriations from low tax affiliates. Therefore, the residual or incremental U.S. tax liability due upon repatriation can be thought of as the difference between the U.S. tax rate and the average foreign tax rate paid on repatriated foreign earnings.

Accounting rules dictate the amount and timing of MNCs' expense recognition of repatriation taxes in accounting earnings. The general rule under Statement of Financial Accounting Standard 109 (SFAS 109), *Accounting for Income Taxes*, is to recognize an expense for the repatriation tax liability on foreign earnings in the same accounting period the earnings are generated. Because MNCs do not pay the repatriation tax until they repatriate the earnings to

the U.S., this accounting treatment often requires them to recognize an estimate of the repatriation tax expense in the financial statements long before they pay the taxes. Due to the potentially permanent nature of foreign investment, Accounting Principles Board Opinion No. 23 (APB 23), *Accounting for Income Taxes – Special Areas*, and SFAS 109 allow MNCs to defer recognizing the repatriation tax expense until repatriation if they designate the earnings as indefinitely reinvested abroad (hereafter referred to as "permanently reinvested earnings" or "PRE"). However, when the MNC eventually repatriates the earnings, it must recognize the tax expense with no corresponding income on which it is paying tax because it recognized that income in a prior accounting period.

While all firms have incentives to delay a cash tax payment, firms that face capital market pressure also have incentives to delay financial statement recognition of a tax expense to increase current earnings. This incentive raises the possibility that financial reporting plays a role in the repatriation decision. In fact, recent survey evidence supports this conjecture. Executive survey responses about repatriation decisions show that recognition of the accounting tax expense matters as much as the cash flow effect of the tax payment when deciding whether to repatriate foreign earnings (Graham et al. [2009]). We explore this issue by studying the actual repatriation behavior of U.S.-based multinational firms.

To investigate the effect of capital market incentives on repatriations of foreign earnings, we model U.S. MNCs' annual dividend repatriations from foreign affiliates as a function of the amount of tax on repatriations, a measure of capital market pressure to increase earnings, and other economic determinants of repatriations consistent with related literature. Of particular interest in our study is the interaction between the amount of tax on repatriations and our measures of capital market pressure which allow us to test whether firms' repatriations are more

sensitive to the amount of tax on the repatriation (hereafter, the tax cost of repatriation) when that tax creates a financial reporting cost in addition to a cash outflow.

We use two measures of capital market pressure to identify firms for which the financial reporting cost of repatriation matters more: firm ownership and the extent of tax expense deferral under APB 23. Empirical accounting literature suggests that private firms are less sensitive to capital market pressures than public firms (Cloyd et al. [1996], Penno and Simon [1986], Wolfson [1993]). Thus, we expect firm ownership to explain cross-sectional variation in firms' repatriation behavior. Second, among public firms, we investigate whether the amount that firms repatriate is related to the amount of permanently reinvested earnings under APB 23. All else equal, firms that have deferred more repatriation tax expense under APB 23 face higher financial reporting costs of repatriation.[1]

Our sample includes 479 public and 98 private U.S.-based multinationals from 1999 through 2004. After controlling for investment opportunities, size, financing constraints, and country specific factors, we find that 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 23 are more sensitive to the tax cost of repatriating than other public firms. Based on these results, we estimate that financial reporting concerns decrease annual repatriations by about $6.5 billion.

We triangulate our results using three additional analyses. First, we examine repatriation behavior by fiscal quarter and find that firms facing capital market pressure are more sensitive to the tax cost of repatriating during the fourth quarter than other firms. Second, we extend Foley et

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[1] One limitation of the APB 23 proxy for financial reporting costs is that it may not completely disentangle the financial reporting cost from the cash tax cost. To rule out this possibility, we perform numerous sensitivity and robustness tests and continue to find results consistent with our hypotheses.

al. [2007] to show that the effect of taxes on the accumulation of foreign cash in public companies is exacerbated by financial reporting costs. Third, we estimate a regression of repatriation behavior on separate measures of the cash tax cost and the financial reporting cost of repatriation for public firms and find that both costs are negatively related to repatriations. Each of these analyses supports our main finding that capital market pressure plays a role in the repatriation decisions of multinational firms.

This study makes two contributions to the literature. First, this study informs the broader policy debate over reforms to our international tax system. Understanding non-tax factors that affect repatriation behavior can aid our understanding of the responsiveness of repatriations to changes in the tax system. Our evidence suggests that financial reporting is an important factor in the decision to repatriate foreign subsidiary earnings. Further, our evidence that capital market pressure deters repatriation is consistent with the build-up of undistributed foreign earnings, as well as the surge in repatriations under the AJCA.

The notion that financial reporting costs play a role in repatriations has been recognized for a number of years. For example, Scholes et al. (2000) note that the financial reporting for U.S taxes on repatriations under APB 23 is a cost that accompanies the decision to reinvest versus repatriate. However, the issue received little attention in academic literature until the AJCA generated new interest in the topic. In concurrent work, Shackelford et al. (2009) theoretically model the effect of taxes and Generally Accepted Accounting Principles on real decisions of firms and note that APB 23 is an example of an area where such forces have potential importance. In another concurrent study Graham et al. [2009] provide survey evidence that the recognition of financial accounting tax expense is an important determinant of repatriation. Our

study adds to this literature by empirically estimating the effect of financial reporting costs on repatriations.[2]

Second, this paper informs standard setters considering the merits of allowing deferral under APB 23. The repeal of APB 23 was considered as part of the IASB and FASB short-term convergence project on income taxes. The Global Oversight Committee of the Financial Executives Institute claims that the adoption of a non U.S. accounting standard for undistributed 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 the European Roundtable to have the issue of APB 23 rescission removed from the convergence project.[3] Since we find that cash balances abroad are higher for firms relatively more sensitive to the financial reporting cost of repatriation, our results suggest that APB 23 impedes capital mobility thereby hurting the efficiency of MNC capital allocation. In addition, while IFRS is meant to increase consistency in global financial reporting, APB 23 creates a setting where U.S. MNCs have an unrecognized deferred tax liability associated with foreign earnings, but firms based in countries with territorial systems do not. Our study suggests that APB 23 not only decreases consistency in financial reporting across countries, but also creates incentives for U.S. MNCs to leave earnings abroad.

Section 2 provides a background and develops our hypotheses. Section 3 describes our data. Section 4 describes our empirical specification. Section 5 discusses our main results and Section 6 provides results from additional analyses. Section 7 concludes.

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[2] Our evidence is consistent with the surge in repatriations under the AJCA because firms could avoid recognizing a large portion of the unrecognized deferred tax liability by repatriating during the tax holiday. Thus, the potential to reduce financial accounting tax expense provided an additional incentive to repatriate. A detailed investigation of the effect of financial reporting costs on repatriations under the AJCA is beyond the scope of this paper.
[3] See http://www.thefreelibrary.com/Technical+committee+profile:+Global+Oversight+Committee+(GOC).-a0130779987

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2. Background and Hypotheses

Of interest in our study is how tax law and accounting rules interact to influence repatriation decisions. Therefore, to motivate our hypotheses, we first describe the tax and accounting rules that govern the repatriation of foreign earnings.

2.1 REPATRIATION AND TAX LAW

In the following discussion, we assume that a U.S.-based MNC has a foreign affiliate that generates positive earnings and faces an additional tax liability upon repatriation of those earnings to the U.S., i.e. the foreign affiliate faces a foreign tax rate lower than the U.S. rate. The taxation of repatriation, discussed here, and its interaction with financial accounting, discussed in the next section, is outlined in Figure 1.

From a tax perspective, the MNC has two choices with differing effects on the current period cash outflow for taxes on foreign earnings. It can reinvest the earnings abroad or repatriate them to the United States. When the MNC reinvests the foreign earnings abroad (as in scenarios II and III in Figure 1) the total current period taxes paid on foreign earnings consists only of foreign taxes; the repatriation tax cost is zero. Thus, payment of the repatriation tax is deferred to a future period. Alternatively, when the MNC repatriates foreign earnings (as in scenarios I, IV, and V in Figure 1), the total current period taxes paid on foreign earnings consists of both foreign and U.S. taxes, with the U.S. tax component representing the repatriation tax. Note that *tax law - not financial reporting rules - determines when the repatriation tax is paid*.

Previous work on repatriation decisions in the economics and finance literatures concludes that taxes are a significant determinant of repatriation. Seminal theoretical work shows that when after-tax returns and tax rates are constant, the tax cost of repatriation does not affect the repatriation decision because all foreign earnings will eventually be taxed at the U.S. tax rate

(Hartman [1985]). However, subsequent empirical evidence suggests that repatriations are decreasing in the tax cost of repatriation (Hines and Hubbard [1990], Altshuler and Newlon [1993], Grubert [1998], Desai et al. [2001], Altshuler and Grubert [2003], Foley et al. [2007]). Altshuler et al. [1995] reconcile theoretical work with the empirical evidence by distinguishing between permanent and transitory changes in tax rates. The authors point out that dividend repatriations are negatively related to the transitory tax price of repatriation but are not related to the permanent tax price of repatriation.

Desai et al. [2007] find that non-tax factors, such as domestic financing needs and agency problems inside firms, also shape MNC repatriation policy. Altshuler and Grubert [2003] study several investment-repatriation strategies and find 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. A factor not considered by existing estimates of the effect of taxes on repatriations is the related financial reporting cost created by capital market incentives to increase earnings and the accounting for taxes on repatriation.

2.2   REPATRIATION AND ACCOUNTING RULES

The rules governing accounting for U.S. income taxes on foreign subsidiary earnings under APB 23 and SFAS 109 provide a U.S. MNC two choices with differing effects on the MNC's financial accounting earnings. When a MNC has a sufficiently long reinvestment-horizon on foreign earnings, it can designate the earnings as permanently reinvested under APB 23 and avoid recognizing the tax cost of repatriation as an expense in the financial statements until those earnings are repatriated (scenario III in Figure 1). Thus, recognition of any repatriation tax liability is deferred to a future period. Alternatively, when the MNC intends to repatriate foreign earnings in the foreseeable future, it recognizes or accrues the actual or expected repatriation tax

as an expense in the period when it generates the related foreign earnings (scenario II in Figure 1). Note that *accounting rules – not tax laws - determine when the repatriation tax is recognized as an expense in the financial statements.*

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 and Company [2005]). Krull [2004] finds that MNCs increase amounts designated as PRE to maximize reported after-tax earnings and meet earnings benchmarks. However, the study does not address whether the expense recognition affects actual repatriation decisions of MNCs. We address that question by studying the interaction of accounting rules and tax law.

2.3   INTERACTION BETWEEN TAX AND ACCOUNTING

Tax law, which determines when the repatriation tax is paid, and accounting rules, which determine when the repatriation tax is recognized as an expense, interact in important ways that allow us to develop testable hypotheses. In Figure 1, a key tax consequence of the decision to repatriate foreign earnings (I versus II & III) is payment of the repatriation tax. However, the key accounting consequence of the use of the PRE designation (II versus III) is deferral of the recognition of the expected repatriation tax in after-tax accounting earnings. Thus, accounting expense deferral can be thought of as an additional benefit to tax expense deferral for firms that do not repatriate because after-tax financial accounting earnings increase when firms designate foreign subsidiary earnings as permanently reinvested. This benefit is apparent in Figure 1 by observing that under Scenario III (relative to II) firms that do not repatriate enjoy the absence of a repatriation tax *and* report the highest after-tax earnings.

Conversely, once a firm designates foreign earnings as PRE, recognition of the U.S. tax expense upon repatriation in a subsequent accounting period will have a more material negative

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effect on earnings relative to current recognition because the repatriation tax expense is recognized in a later period than the corresponding foreign income. Thus, accounting expense recognition is an additional cost to repatriation because after-tax financial accounting earnings decrease when firms repatriate earnings that were previously designated as permanently reinvested. This cost is apparent in Figure 1 by observing that under Scenario IV firms that repatriate current and prior earnings previously designated as PRE pay the U.S. repatriation tax *and* report the lowest after-tax earnings.

2.4   HYPOTHESES

Prior literature finds evidence that tax costs are a significant determinant of repatriation behavior; specifically high tax costs decrease repatriations. To examine whether high financial reporting costs also decrease repatriations, we must empirically disentangle the cash flow effect of the tax cost of repatriation from the financial reporting effect because the two effects are of the same dollar magnitude and often occur together. In order to disentangle the tax cost from the financial reporting cost, we identify factors across which the financial reporting costs vary while holding the tax cost constant. That is, we conjecture that the effect of the tax cost of repatriations documented in prior literature differs depending on the existence of financial reporting costs created by capital market pressure. We use two measures of capital market pressure and hypothesize that in the presence of these pressures, the tax cost matters more.[4]

First, we use firm ownership type – public versus private – because this measure exhibits the two conditions needed to disentangle the tax cost from the financial reporting cost: 1) both public and private firms are subject to the same tax laws and the same economic incentives to minimize

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[4] Since the magnitude of the financial reporting cost is a direct consequence of the magnitude of the tax cost, it is difficult conceptually to think of the financial reporting cost as a separate cost. Thus, we hypothesize an interaction effect, whereby firms are more sensitive to the tax cost of repatriation in the presence of a financial reporting cost.

tax costs, and 2) financial reporting incentives vary across public and private firms because of the difference in the constituents to which the two groups report.

The first condition requires not only that public and private firms are subject to the same tax laws, but that they also attribute the same value to tax savings. Although public and private firms are subject to the same tax laws, existing studies find evidence that private firms are more aggressive tax planners that public firms (Beatty and Harris [1999], and Mikhail [1999]). In addition, Hanlon et al. [2007] link private ownership to greater proposed income tax deficiencies with the IRS than public ownership. While these results suggest that private firms value tax savings *more* than public firms, they also suggest that our empirical tests are biased against finding results.[5]

The second condition requires that public firm managers face stronger incentives to manage accounting earnings than private firm managers. 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 typically have incentives to report higher earnings to increase both the value of the firm and their compensation (Cloyd et al. [1996]; Penno and Simon [1986]).[6] In contrast, private firms have high levels of insider

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[5] In contrast to these studies, Graham et al. [2009] report survey results suggesting that public firms rank cash tax deferral as more important in the reinvest versus repatriate decision than private firms. However, this result is based on a univariate comparison between public and private firms that does not control for the many other factors that affect the repatriation decision. We control for these other factors, such as size, growth, leverage, cost of capital, cash and country level factors, in our multivariate empirical tests and discuss these controls in more detail in Section 4 of the paper. Additionally, Graham et al. [2009] report that firms with lower ETRs rank cash tax deferral higher than other firms. The private firms in our sample have lower ETRs (mean = 0.27) relative to the public firms (mean = 0.33) consistent with studies that find that private firms are more tax aggressive then public firms.

[6] Note that our analysis presumes that there is variation in the extent to which public and private firm managers focus on after-tax earnings. Data on private company compensation is extremely difficult to obtain. However, survey evidence shows that private firms use significantly less equity in their compensation contracts than public firms (See PricewaterhouseCoopers 2007 Trendsetter Barometer report "Private companies can compete with public companies for executive talent"). Since investors have been shown to fixate on income (see Hand [1990]), less equity compensation suggests that private firm managers may be relatively less focused on net income. In addition, the bulk of private company executive compensation comes from base salary (74%) rather than other variable pay that may be a function of bottom line earnings. Moreover, the 2007 Financial Executives Compensation Survey

ownership, encounter less information asymmetry between managers and investors, and

therefore have relatively less incentive to increase earnings (Beatty and Harris [1999]). Using

survey evidence, Penno and Simon [1986] find that public firms are more likely to use income

increasing accounting methods and Cloyd et al. [1996] find that public firms are less likely to use

financial accounting methods that conform to income decreasing tax choices because conformity

imposes higher nontax costs on mangers of public firms. Consistent with these survey results,

Badertscher et al. [2009] shows that private (public) firms engage in more conforming (non-

conforming) tax planning. In addition, Givoly et al. [2009] examine a broad sample of U.S.

firms and find evidence that earnings management is more pronounced in public firms.[7] This

leads to our first hypothesis:

> H1: *Ceteris paribus*, public firms are more sensitive to the tax cost of repatriating than
> private firms.

Our second measure of the financial reporting cost of repatriation uses the designation of

earnings as permanently reinvested under APB 23. The tax laws and incentives to avoid taxes are

the same regardless of whether a firm designates earnings as PRE. However, the financial

reporting costs of repatriation differ depending on the firm's use of PRE. In our discussion of

Figure 1, we show that firms that do not use the PRE designation will face a lower financial

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(FEI Survey) details that 71% of private company CFO's are evaluated on a metric OTHER than net income after taxes (e.g., EBIT, EBITDA etc). Finally, the FEI Survey reports that after-tax performance metrics are used 78% more often than pre-tax performance metrics for public firm manager compensation; whereas after-tax performance are only used 23% more often than pre-tax performance metrics in private firm manager compensation.

[7] An extensive literature examines the effect of firm ownership on earnings quality. However, data constraints require many of these studies to rely on narrow samples that make their results difficult to generalize to our setting. For example, Beatty and Harris [1999] and Beatty et al. [2002] use samples of bank holding companies. Each of these studies find evidence that public firms are more likely than private firms to manage earnings. In contrast, Burgstahler et al. [2006] uses samples of firms based in the European Union and finds that private firms exhibit higher levels of earnings management than public firms. We draw from the recent work of Badertscher et al. [2009] and Givoly et al. [2009] in developing our hypotheses because they examine earnings management in a broad sample of U.S. firms, and therefore, their objective and sample is most closely related to ours.

reporting cost to repatriation because these firms recognized the expected U.S. repatriation tax in the period when the foreign earnings were generated. Firms that have designated undistributed foreign earnings as PRE are more likely to incur a financial reporting cost when repatriating than other firms. Furthermore, firms that have designated *all* of their undistributed foreign earnings as PRE cannot avoid tax expense recognition in their financial statements by repatriating non-PRE. Because we cannot determine whether firms repatriate PRE or non-PRE, we test for differences in repatriations for firms that report high versus low levels of PRE. This test focuses on public firms because we can only observe PRE disclosures from SEC filings of public firms. Hence, we test the following hypothesis:

> H2: *Ceteris paribus*, public firms with high amounts of permanently reinvested earnings under APB 23 are more sensitive to the tax cost of repatriating than other public firms.

3.   Data

Examining whether repatriation behavior of MNCs is affected by financial reporting rules necessitates measuring repatriation activity, the tax cost of repatriation, and capital market pressure to increase earnings. To construct these measures, we combine firm-level data from two sources. First, we obtain information on repatriations and the tax cost of repatriating for MNCs from the results of two surveys conducted by the Bureau of Economic Analysis (BEA). Second, we determine ownership type for each firm in our sample and hand collect PRE data from the public firms' SEC filings.[8] By combining these two datasets, we can identify MNCs in the BEA data that face varying degrees of capital market pressure.

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[8] We identify public companies in the BEA data by matching with Compustat on company name and verifying private ownership using the Lexis Nexus Corporate Affiliations database.

We construct measures of repatriation activity and the tax cost of repatriation using two BEA Surveys of U.S. Direct Investment Abroad.[9] These surveys provide data on the financial and operating characteristics of U.S. MNCs operating abroad. 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. The BEA requires U.S. MNCs 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. 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 survey, the *Quarterly Balance of Payments Survey of U.S. Direct Investment Abroad*, captures direct transactions between the domestic and foreign operations of U.S. MNCs and limited information on foreign affiliates. From this survey, we collect quarterly net income and the dollar amount of annual and quarterly dividends that foreign affiliates pay directly to the U.S parent. The second survey, the *Annual (Benchmark) Survey of U.S. Direct Investment Abroad*, captures more extensive financial and operating data for both directly and indirectly owned affiliates of U.S. MNCs and allows us to compute firm-level control variables.[10]

To construct our sample, we create a balanced panel of U.S. parents appearing in the BEA data for six consecutive years from 1999 through 2004. Our panel of U.S. parents includes all

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[9] See http://www.bea.gov/surveys/diadurv.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. 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 ten percent of the voting securities of an incorporated foreign business enterprise or the equivalent interest in an unincorporated foreign business enterprise.

[10] The BEA collects survey responses on a fiscal year basis, which it defines as the financial reporting year end. Additionally, the survey instructions require that U.S. MNCs report financial and operating data using U.S. Generally Accepted Accounting Principles.

U.S. MNCs with at least one affiliate reporting in each of those six years.[11] Because we examine the effect of financial reporting on repatriation decisions, we aggregate affiliate-level data at the parent level and eliminate intercompany transactions.

Table 1, Panel A describes our BEA sample and the results of matching our sample of U.S. parents to Compustat firms. 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 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, and they face different incentives than other firms because they are regulated. In addition, we are unable to compute many of our regression variables for these firms because the BEA collects fundamentally different data for bank affiliates than for other affiliates. Finally, we eliminate pass-through entities (e.g., partnerships, LLCs and REITS) since they are typically not subject to corporate income taxes. Our final sample consists of 577 U.S. parent firms (25,459 affiliates); 479 parents (23,669 affiliates) are public and 98 parents (1,790 affiliates) are private.

Table 1, Panel B provides a comparison of our BEA sample to a sample of Compustat firms with evidence (in Compustat) of foreign activity. There are a total of 10,858 U.S. incorporated

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[11] This restriction limits our sample size. In addition, to reduce the reporting burden for MNCs, the BEA only requires an affiliate to fill out the survey in a given year if it meets the size threshold for that year. The affiliate size threshold is $7 million in 1999, $30 million in 2000-2003, and $10 million in 2004. The 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. However, we use only reported data in our analyses which further limits our sample size to firms with at least one affiliate that meets the size threshold in each year. Additional information on the BEA data can be found in Mataloni [2003].

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 because the size of their foreign operations fell under the BEA reporting

thresholds for all or some sample years.[12] Interestingly, 76 firms appear in the BEA data that

could not be identified as having foreign activity from Compustat alone. Table 1 Panel C

suggests that broad industry representation is present in our sample, with a heavy emphasis on

textiles, manufacturing, and retail. Public and private firms locate their activities in similar

jurisdictions as evidenced in Table 1, Panels D and E.

4.   Research Design

Prior literature finds evidence that high tax costs are associated with lower repatriations. Our

hypotheses suggest that firms are more sensitive to the tax cost of the repatriation in the presence

of capital market incentives. We test H1 and H2 by empirically modeling annual repatriations as

a function of the tax cost of repatriation, a proxy for capital market pressure, an interaction term,

and economic incentives to repatriate as follows:

$$\text{Repatriations} = \beta_0 + \beta_1 \text{RepCost} + \beta_2 \text{Capital Market Pressure}$$
$$+ \beta_3 \text{Capital Market Pressure} \times \text{RepCost}$$
$$+ \sum \beta_k \text{Controls}_k + \sum \beta_t \text{Year}_t + \sum \beta_j \text{Industry}_j + \varepsilon \qquad (1)$$

Where:

Repatriations   = Annual repatriations scaled by firm sales

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[12] We compare the size of the 1,058 firms without BEA data to the firms in our sample and find that the median foreign income for this group of firms is only $1.5 million whereas the median for the firms in our sample is $56.3 million.

RepCost   = An estimate of the U.S. tax the firm would owe if it repatriated all
                                        unremitted foreign earnings, computed as the U.S. statutory rate
                                        (35 percent) minus *Affiliate Creditable Tax Rate*.[13]

Capital Market Pressure = An indicator variable equal to 1 for firms that face relatively high
                                        capital market pressure to increase earnings and zero otherwise. We
                                        use two proxies for capital market pressure. *Public*, equals 1 for
                                        public firms, zero otherwise. *HighPre* equals 1 for public firms with
                                        PRE that equals or exceeds total assets in low tax affiliates (i.e.,
                                        affiliates with *Affiliate Creditable Tax Rate* equal to 30 percent or
                                        less) and zero otherwise.[14]

See Figure 2 for definitions of all other variables.

We estimate Equation (1) using a Tobit procedure because our dependent variable is left-

censored at zero.[15] *RepCost* measures the amount of tax on repatriations (i.e. the tax cost of

repatriations). Consistent with existing literature, we expect a negative coefficient on *RepCost*.

Consistent with H1 and H2, our focus is on the interaction between *RepCost* and *Capital Market

Pressure*. We expect that firms facing both capital market pressure to report higher earnings and

a cash tax cost to repatriating will be more sensitive to the tax cost of repatriating than firms that

face only a cash tax cost. Because public firms face more capital market pressure to increase

earnings than private firms,H1 predicts that public firms will be more sensitive to the tax cost of

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[13] We calculate *Affiliate Creditable Tax Rate* by aggregating affiliate-level foreign taxes and pre-tax income as of
the date the affiliate is first included in the BEA Surveys or 1982, whichever comes first. We then subtract
repatriations to estimate foreign taxes and undistributed pre-tax foreign earnings in each year. The affiliate tax rate is
foreign taxes divided by undistributed pre-tax foreign earnings. We believe that the difference between the U.S.
statutory rate and *Affiliate Creditable Tax Rate* is a better approximation of the incremental taxes due upon
repatriation than an average of the affiliates' current period foreign tax rates since *Affiliate Creditable Tax Rate* is
estimated in a manner similar to the U.S. foreign tax credit computation under Section 902 of the Internal Revenue
Code.
[14] We obtain PRE from SEC 10-K filings. We use assets as a deflator for PRE to identify firms with large amounts
of PRE because assets is a stock variable which is more comparable to the cumulative nature of PRE than sales. We
use assets in low tax affiliates because we want to estimate the extent to which the firm must recognize a tax
expense on repatriations. Thus, we assume that all PRE is in low tax affiliates. To the extent that firms have PRE in
high tax affiliates we overestimate the financial reporting cost, which creates a conservative bias in our results.
[15] The BEA data only allow us to observe annual capital contributions from U.S. parents to foreign affiliates in 1999
and 2004 while we observe distributions from foreign affiliates to U.S. parents for all years in our sample. Using
data for distributions but not contributions creates a concern that our data is left-censored at zero because non-
repatriating affiliates receive capital contributions (i.e.., negative distributions).

repatriation than private firms. Therefore, all else equal, we expect a negative coefficient on *Public × RepCost*.

H2 predicts that public firms with significant amounts of permanently reinvested earnings are more sensitive to the tax cost of repatriations than other public firms. While the dollar amount of the repatriation tax is the same for cash taxes and the tax expense on the financial statements, the timing of the two effects differs. *HighPre* measures this timing difference. Firms that can repatriate foreign earnings not designated as PRE can repatriate without recognizing a tax expense on the financial statements. Firms with high amounts of PRE have less ability to repatriate without recognizing a tax expense on the financial statements. For these firms, the financial reporting cost occurs at the same time as the cash tax cost. Thus, the repatriation tax has a more negative effect on repatriation decisions for firms with high amounts of PRE. We include *HighPre* and *HighPre × RepCost* to capture the incremental effect of the PRE designation on public firms' sensitivity to the tax cost of repatriating. Consistent with H2, we expect a negative coefficient on *HighPre × RepCost.*

In addition to our variables of interest, we include controls for other factors that influence repatriation decisions. First, we include controls for investment opportunities abroad and in the U.S. (*Foreign Growth* and *U.S Growth*, respectively). Following La Porta et al. [2002] and Desai et al. [2004] we proxy for investment opportunities by computing a three-year historical sales growth rate for all U.S. owned affiliates in each country-industry.[16] 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. Consistent with this theoretical

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[16] As these authors point out, traditional measures such as market-to-book ratios or Tobin's Q are not feasible in a multinational setting. The affiliates themselves do not have observable market values, and the market-to-book ratios of publicly-traded foreign-owned firms are not good proxies for investment opportunities of U.S. owned affiliates.

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result, we expect repatriations to be negatively related to foreign opportunities and positively related to domestic opportunities.

Equation (1) also includes controls for size of foreign operations, agency costs, financing constraints, and costs of financing. To control for the size of foreign operations, we include *Size*, the log of undistributed 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 *U.S. Leverage* and *Foreign Leverage* to control for firms' debt service needs and capital structure. Firms may be more reluctant to repatriate if they have high foreign debt service suggesting a negative association between *Foreign Leverage* and repatriations. We do not make a sign prediction on *U.S. Leverage* because there are two opposing forces regarding its relation to repatriations. First, *U.S Leverage* may be positively associated with repatriations if firms distribute funds to service domestic debt. Alternatively, *U.S. Leverage* may be negatively associated with repatriations because firms may have borrowed domestically against the undistributed foreign earnings.

We include *U.S. Interest* to control for the domestic cost of borrowing. We anticipate that firms with a higher cost of borrowing in the U.S. have higher dividend repatriations. We include *Foreign Interest* to control for the foreign cost of borrowing. We expect that firms with a higher cost of borrowing abroad have lower dividend repatriations. We include *Foreign Cash* to proxy for the potential agency costs of excess cash and anticipate that firms with more cash abroad have higher dividend repatriations.[17] *%Foreign Sales* is our proxy for the opportunity for multinational tax planning via investment. As discussed in Altshuler and Grubert [2003], firms with greater overseas activity have more opportunities to defer repatriation taxes through

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[17] The BEA surveys do not capture domestic cash balances in all years during our sample period, which prohibits us from including a control for domestic cash holdings.

intercompany transfers.[18] Thus, we expect a positive coefficient on *%Foreign Sales*. We include

U.S. Loss 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

carry forward period into foreign tax credits (FTCs) with only a five-year carry forward

period.[19,20] Finally, we include four measures to control for country-level factors that affect

repatriations. We first determine each of the country-level measures at the affiliate level, and

then 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 (La Porta et al. [1998]). *Corruption* is an index taking values from one through 10,

with 10 representing the lowest level of corruption (La Porta et al. [1998]). Corruption may

increase the cost of doing business such that more capital must remain in the country;

alternatively corruption may increase repatriations to reduce the probability of expropriation or

theft. *Infrastructure* is an index taking values of one through ten, with ten representing the best

infrastructure (La Porta et al. [1999]). All else equal, the less developed a country's

infrastructure, the more capital the company likely needs to invest in its operations. Finally,

Capital Control is equal to one if the country restricts a firm's ability to take funds out of the

country, and zero otherwise (International Monetary Fund [2006]).

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[18] 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 (1), its coefficient is insignificant and our inferences are unaltered.

[19] Power and Silverstein also point out that i) FTC usage is generally more restrictive than NOL usage because of the basket system, and ii) NOLs can be used to offset the tax liability on U.S. source income whereas FTCs can only offset the tax liability on foreign source income. This flexibility makes NOL carry forwards more valuable than FTC carry forwards.

[20] The American Jobs Creation Act (AJCA) of 2004 extended the carry forward period available for FTCs from five years to ten years. Any excess FTCs that are available to be carried forward to tax years ending after October 22, 2004 are available for the extended carry forward period. The five-year carry forward period was in effect for most of our sample period. Additionally, the ten-year period is still substantially less than the 20-year carry forward period available for NOLs.

5. Results

5.1 BEA DESCRIPTIVE STATISTICS

Table 2 provides descriptive statistics for our BEA sample of 577 firms from 1999 through 2004. From this balanced panel we eliminate 285 firm-years for which we do not have all required regression variables for our multivariate analyses resulting in 3,177 firm-years. As we conduct our analysis using the affiliated group (i.e., the domestic U.S. parent plus reporting foreign affiliates), we report all statistics at the parent level, unless otherwise noted. We show statistics separately for private firms, low PRE public firms (*HighPre* = 0), and high PRE public firms (*HighPre* = 1). We winsorize all continuous measures at the top and bottom one percent and all tax rate measures to fall between zero and 100 percent. Finally, due to confidentiality restrictions, medians reported in the table (Median5) represent the mean of the five middle observations.

Panel A reports descriptive statistics for our regression variables. *Repatriations* is significantly greater for high PRE firms than for both low PRE public and private firms. This result is interesting for two reasons. First, we expect public firms to repatriate less than private firms because private firms are likely to have more limited access to capital than public firms. Consistent with private firms being aggressive tax planners, private firms have a lower *RepCost* (10.26 percent) than public firms (low PRE=11.30 percent, high PRE=11.52 percent).

Second, high PRE firms should be those with the greatest investment opportunities abroad, consistent with the longer investment horizon required to designate earnings as permanently reinvested. Although statistically different, the mean of our proxy for domestic investment opportunities (*U.S. Growth*) is of comparable economic magnitude across public and private

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firms consistent with the similar industry representation between private and public samples documented in Table 1, Panel C. Foreign investment opportunities (*Foreign Growth*) are significantly lower for private firms (7.07 percent) than low PRE and high PRE public firms (11.62 percent and 20.90 percent, respectively). Note that the foreign investment opportunities are the highest for high PRE public firms consistent with PRE signaling reinvestment into profitable overseas activities.

Measures of domestic and foreign leverage (*U.S. Leverage* and *Foreign Leverage*, respectively) suggest that private firms use more foreign debt relative to low PRE and high PRE public firms (2.16 versus 1.79 and 1.25, respectively), while low PRE and high PRE public firms use more domestic debt relative to private firms (0.73 and 1.37 versus 0.60, respectively). Interestingly, there is no statistically significant difference in domestic or foreign 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. Public and private firms have equal realizations of negative pre-tax income in their domestic operations (*U.S. Loss* equals approximately 18 percent for both types of firms).

Panel B reports descriptive statistics for tax rate measures used in existing research. Consistent with our estimate of the tax cost of repatriating, *RepCost*, the private sample appears to face higher income tax burdens abroad. *DFH Tax Rate*, the median of all affiliate tax rates for all U.S. affiliates operating in a country-year as described in Desai et al. [2001], is 27.50 percent for private firms but only 25.91 percent and 25.54 percent for low PRE public and high PRE public firms, respectively. The fact that public firms have lower current incomes taxes is consistent with Graham et al.'s (2009) survey evidence that the benefits of income tax expense deferral is of primary importance in foreign direct investment location decisions of public

companies. Consistent with private firms facing higher income tax burdens and a lower expected tax cost of repatriation, our measure of the *Affiliate Creditable Tax Rate* is higher for private firms than for both sub-samples of public firms. Finally, the current period foreign income taxes paid over foreign pre-tax income (*Current FTR*) is highest for high PRE firms (28.95 percent). We interpret this result as suggesting that the undistributed earnings of high PRE firms are from prior years, that is, a non-trivial proportion of the undistributed earnings were likely generated before our sample period.

Panel C reports general descriptive statics for the BEA data. The mean return on sales, *Prof*, is 3.89 percent for private firms and 3.34 percent for low PRE and 1.21 percent for high PRE firms suggesting that private firms are more profitable than public firms. 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 group and is larger for public firms than private firms. Private firms have 9.08 affiliates on average, whereas low PRE (high PRE) public firms have 22.71 (28.58) affiliates on average. Mean *Domestic (Foreign) Sales* are $1.88 billion ($775 million) for private firms and $6.12 billion ($3.12 billion) for low PRE public firms. High PRE public firms' mean *Domestic (Foreign) Sales* of $5 billion ($3.38 billion) are similar to the low PRE public sample. We control for these differences in our regression analysis by including *Size* and *%Foreign Sales* in the empirical model. In Panel A, *Size* is significantly higher for public firms than private firms. Although of similar magnitude, high PRE public firms have a greater proportion of their sales overseas (*%Foreign Sales* = 35.77 percent) than low PRE public (29.82 percent) and private (28.38 percent) firms.

Table 2 Panel C shows that approximately 12.5 percent of our public sample has PRE greater than or equal to assets in low tax affiliates.[21] The mean low PRE firm designates 25.90 percent of its assets in low tax affiliates as permanently reinvested under APB 23. Because a nontrivial proportion 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 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) for our sample of 577 public and private firms with necessary data from 1999 through 2004. Table 3 Column (1) provides parameter estimates from Equation (1) using *Public* as a proxy for capital market pressure. The coefficient on *RepCost* is not significantly different from zero suggesting that repatriation taxes do not significantly affect repatriations of private firms.[22] The coefficient on *Public* is not significantly different from zero suggesting that, holding the tax cost of repatriation constant, public companies are no less likely to repatriate, on average, than private companies. Consistent with H1, the interaction between *Public* and *RepCost* is negative and significant (-0.0385; p<.10) suggesting that public firms are more sensitive to the tax cost of repatriation than private firms.[23]

Columns 1(a), 1(b), and 1(c) report the marginal effects of the Tobit parameters, which we use to interpret the coefficient estimates. Column 1(a) reports the marginal effect of each

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[21] The 12.5% = 333 (HighPre)/2655 (Public).

[22] However, when we estimate an empirical model similar to Desai et al. [2001] with only *RepCost*, *U.S. Growth*, *Foreign Growth*, *Size*, and *Lag Repatriations*, the coefficient on *RepCost* is -0.0755 (p<.05; marginal effect=-0.017). Thus, the difference between our result and Desai et al. [2001] is likely due to the inclusion of additional control variables and fixed effects.

[23] We recognize that there are differences in the availability of capital for public versus private firms. However, it is not clear why this association would explain the interaction effect of ownership type and the tax cost of repatriation. An alternative story is that private companies are less sensitive to the tax cost of repatriating because their cost of capital (borrowing) is higher. However, this conjecture is not borne out in the data because, from Table 2 Panel A, private firms have a lower U.S. interest rate (*U.S. Interest*) than public firms.

variable on the unconditional expected value of *Repatriations*. We calculate the marginal effect

of *Public × RepCost* using Ai and Norton [2003] and McDonald and Moffitt [1980].[24] The

marginal effect of *Public x RepCost* on the unconditional expected value of *Repatriations* is -

0.015. This estimate suggests that the change in *Repatriations* when *RepCost* changes from zero

to the sample mean of 0.1115 is 1.5 percent of sales less for a public firm than for a private firm.

Mean worldwide sales (*Domestic Sales + Foreign Sales*) for our full sample is $8.07 billion.

Therefore, the average public firm repatriates $13.5 million (-0.015 × 0.1115 × $8,070=$13.5)

less per year than the average private firm. For our 479 public firms, this figure amounts to $6.5

billion in repatriations per year.

Of the financing and capital structure control variables, only *U.S. Leverage* is significant; the

positive coefficient suggests that firms repatriate foreign earnings to service high levels of

domestic debt. *Size*, *Lag Repatriations*, *%ForeignSales*, *U.S Loss*, and *Mandatory Dividend* are

significant in the expected direction. We interpret the positive coefficient on *%ForeignSales* as

suggesting that firms with a large multinational presence have a greater ability to mitigate

repatriation taxes, leading to greater repatriations.

5.3   PUBLIC ONLY ANALYSIS

In Table 3 Column (2), we report the results of estimating Equation (1) for our sample of 479

public firms. In Column (2) we use *HighPre* and *HighPre × RepCost* to test for the effect of

capital market pressure on repatriations. Consistent with H2, the coefficient on *HighPre ×*

RepCost is negative and significant (-0.0540; $p<.01$).[25] This result suggests that public firms with

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[24] See the Appendix for a detailed discussion of this calculation.

[25] The results in Tables 3 are similar when we define *HighPre* as equal to one if the ratio of PRE to total assets in
low tax countries is greater than or equal to 0.60. Results are also similar if we define *HighPre* as equal to one if the
ratio of PRE to unremitted foreign earnings in low tax affiliates is greater or equal to one. However, when we define
HighPre as equal to one if the ratio of PRE to unremitted foreign earnings in low tax affiliates is greater or equal to
0.80, the coefficient on *HighPre*RepCost* is negative but insignificant. Finally, the results in Table 3 are similar
when we include p_age, the number of years the parent appears in the BEA data, as a control for the age of the

large amounts of unrecorded deferred tax liabilities on foreign earnings are more sensitive to the tax cost of repatriating than other public firms. In Columns (2a), (2b), and (2c) we report the marginal effects. The marginal effect of *HighPre × RepCost* on the unconditional expected value of *Repatriations* is -0.0191. Mean worldwide sales (*Domestic Sales + Foreign Sales*) for our public sample is $9.135 billion. Thus, the change in *Repatriations* when *RepCost* changes from zero to the sample mean of 0.1133 is 1.91 percent of sales or $19.8 million (-0.0191 × 0.1133 × $9,135 = $19.8) less for a high PRE public firm than for a low PRE public firm. This figure amounts to $6.6 billion per year for our 333 high PRE firms.

In summary, we interpret our results as follows. First, public companies are more likely to value the ability to defer recognition of tax expense on undistributed foreign earnings. Therefore, public firms are less likely to repatriate when the tax cost of repatriating is high. Second, public companies with high amounts of PRE are particularly sensitive to the tax cost of repatriating because they are likely to have significant unrecorded tax liabilities and little or no flexibility to repatriate non-PRE foreign earnings. This lack of flexibility further deters repatriation of foreign earnings for public firms that face a high tax cost of repatriation.[26]

5.4   ALTERNATIVE SPECIFICATION

In Table 4 we estimate Equation (1) replacing the dependent variable with repatriations from low tax affiliates divided by worldwide sales (*Low Repatriations*). We also replace *Size*

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parent (*Public x RepCost* coefficient   -0.0368 p-value = 0.10; *HighPre x RepCost* coefficient -0.0504 p-value < 0.001).
[26] This lack of flexibility could also be interpreted as a lack of ability to repatriate if high PRE firms are heavily invested in operating assets abroad. We formally rule out this explanation in Section 6.2 by showing that the high PRE firms hold more cash abroad. We note here that high PRE firms appear to hold a non-trivial portion of their assets in tax havens. Specifically, when we compare the top five countries in terms of the number affiliates between high PRE and low PRE public firms, we find no difference in the location choices (i.e., UK, Canada, Germany, Netherlands, and France). However, when we compare the top five countries in terms of total assets, we find that the list for low PRE firms looks similar to the previous list (i.e., UK, Canada, Netherlands, Germany, and Japan). However, for high PRE firms, all five countries on the list include tax havens following Hines and Rice [1994] (i.e., Bermuda, Netherlands, Ireland, Luxembourg, and Switzerland).

with *Low Size* (log of undistributed pre-tax earnings in low tax affiliates) and *Lag Repatriations* with *Lag Low Repatriations* (lagged repatriation from low tax affiliates), and we add a control for contemporaneous repatriations from high tax affiliates (*High Repatriations*). This specification allows us to test whether the decrease in repatriations for firms with high capital market pressures can be attributed to low tax affiliates that are more likely to generate a tax cost from repatriating. Since repatriations from high tax affiliates typically do not create a tax cost, we anticipate that capital market pressure deters repatriations from low tax affiliates. This specification also allows us to avoid complications associated with interpreting the interaction terms in Table 3 (see Ai and Norton [2003]).

In Column (1) the coefficient on *Public* tests whether, after controlling for the tax cost of repatriating and repatriations from high tax affiliates, public firms repatriate less from low tax affiliates than private firms. The coefficient on *Public* is -0.0528 (p<.05) consistent with H1 and the results in Table 3. The coefficient on *RepCost* is negative and significant, consistent with existing literature. In Column (2), the coefficient on *HighPre* tests whether public firms with significant unrecognized deferred tax liabilities on foreign earnings repatriate less than other public firms. The coefficient on *HighPre* is -0.0358 (p<.05) consistent with H2 and the results in Table 3. In untabulated results, we repeat these tests using *High Repatriations* in place of *Low Repatriations* as the dependent variable and instead use controls for *High Size*, *Lag High Repatriations*, and contemporaneous dividends from low tax affiliates (*Low Repatriations*). The coefficients on *Public* and *HighPre* are not significantly different from zero (p=0.794 and p=0.285, respectively), further suggesting that capital market incentives deter repatriation from low tax affiliates.

6.   Supplemental Analyses

6.1   QUARTERLY REPATRIATION

To further associate our results with financial reporting incentives, we examine the timing of repatriations for public and private firms throughout the year. 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 they can weigh the need for cash with the need to meet earnings goals. 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.

Table 5 provides univariate statistics for quarterly repatriation activity of private and 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 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* 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 – *High Repatriations* and *Low Repatriations* – reveal a general pattern of steady increases in public company repatriations throughout the year from both high tax and low tax affiliates. In Table 5, Panel B, we report 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 (14.04 and 15.53 versus 10.51 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 6 presents multivariate results of estimating the following empirical model that investigates the effect of capital market pressure on quarterly repatriation activity:

$$Q4RepPct = \beta_0 + \beta_1 RepCost + \beta_2 Capital\ Market\ Pressure$$
$$+ \beta_3 Capital\ Market\ Pressure \times RepCost$$
$$+ \beta_4 QTRProf + \beta_5 Size + \Sigma\beta_t Year_t + \Sigma\beta_j Industry + \varepsilon \qquad (2)$$

Q4RepPct equals repatriations during the fourth quarter divided by total repatriations during the year. *QTR Prof* is fourth quarter foreign net income scaled by one fourth of annual foreign sales. We expect that the effect of repatriation taxes on fourth quarter repatriations is different for firms with relatively high capital market pressure. Therefore, we expect significant coefficients on the interaction of *RepCost* with our proxies for capital market pressure - *Public* and *HighPre*.

In Column (1) we investigate whether a higher proportion of public firm repatriations occur in the fourth quarter relative to private firms. In Column (1a) we report marginal effects. We find that the coefficient on *Public × RepCost* is negative and significant (-1.1206; 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 public firms can avoid recognition of tax expense.

In Columns (2) and (2a) of Table 6, we present the results of estimating Equation (2) and the marginal effects using *HighPre* as a proxy for capital market pressure. In Column (2) the coefficient on *HighPre* is insignificant suggesting that firms with large unrecorded tax liabilities do not time repatriations differently than other public firms. The coefficient on *HighPre × RepCost* is negative and significant (-0.8963, p<0.05) suggesting that, as the tax cost of repatriation increases, *HighPre* public firms have fewer fourth quarter repatriations relative to other public firms. Overall, these results suggest that firms with high capital market pressure consider the tax cost of repatriations when timing their repatriations, providing additional support for our hypothesis that capital market pressures affect repatriation decisions.

6.2 FOREIGN CASH HOLDINGS

Next, we evaluate the association between unrecorded deferred tax liabilities and foreign cash holdings for the public firms in our sample. Although we conjecture that capital market pressures lead to predictable differences between repatriations of high PRE and low PRE firms, our results could still be attributable to varying investment opportunities. A public firm that designates earnings as PRE is declaring its intention to reinvest foreign earnings abroad

indefinitely, and may, as a result of investment opportunities, be more sensitive to the tax cost of repatriating. To control for this possibility, we include measures of foreign and domestic investment in our main empirical tests. To further rule out the possibility that our results are confounded by differences in investment opportunities, we follow Foley et al. [2007], to investigate the effect of *HighPre* on foreign cash holdings.

Generally, we expect that firms will repatriate when investment opportunities in the U.S. dominate those abroad and reinvest when foreign investment opportunities dominate those in the U.S. (Hartman [1985]). Foley et al. [2007] find that the tax cost of repatriating helps explain the build-up of cash abroad and, more specifically, in affiliates located in low tax jurisdictions. If a MNC designates foreign earnings as PRE because of investment opportunities, then *HighPre* will have either a negative or insignificant effect on the association between the tax cost of repatriation and foreign cash holdings because new investment is not reflected in the cash account. However, to the extent that public companies designate foreign earnings as PRE because of the financial reporting costs of repatriation, we expect that these costs will result in more cash held abroad, i.e. these costs will exacerbate the positive relation between the tax cost of repatriating and foreign cash holdings.

To investigate this conjecture we estimate the following empirical model using ordinary least squares (OLS) estimation:[27]

$$LN(Cash/Net\ Assets) = \beta_0 + \beta_1 RepCost + \beta_2 HighPre + \beta_3 HighPre \times RepCost$$
$$+\sum \beta_k Controls_k + \sum \beta_t Year_t + \sum \beta_j Industry_j + \varepsilon \qquad (3)$$

LN(Cash/Net Assets) is the natural log of foreign cash holdings divided by non-cash foreign assets consistent with Foley et al. [2007]. We report the results of estimating Equation (3) for our

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[27] We use OLS to be consistent with Foley et al. (2007) and because it is not feasible that cash balances are negative, making tobit inappropriate.

sample of public firms in Table 7. We expect and find that the coefficient on *HighPre* × *RepCost* is positive and significant. This result is consistent with the view that undistributed foreign earnings are trapped abroad for firms with high financial reporting costs of repatriating and helps rule out the possibility that the results in Table 3 stem from higher investment opportunities abroad for HighPre firms.

6.3   ALTERNATIVE PROXY FOR CAPITAL MARKET PRESSURE

In our main tests, we use *HighPRE* as a proxy for firms that have high financial reporting costs of repatriation because firms with high amounts of PRE have less ability to repatriate without recognizing a tax expense in the financial statements than firms with low amounts of or no PRE. An alternative explanation for our results is that PRE is higher for firms that have earnings in low tax jurisdictions and thus are trying to avoid the cash tax cost. If this is the case, then *HighPRE* not only measures financial reporting costs, but also captures some of cash tax effect. To rule out this explanation we develop an alternative proxy for financial reporting costs that relies on the effect of repatriations on the firm's effective tax rate. Specifically, if a firm repatriates current earnings and prior earnings previously designated as PRE (Column IV of Figure 1) it recognizes a higher tax expense as a result of the repatriation than if it repatriates current earnings and prior earnings not previously designated as PRE (Column V of Figure 1). Further, if the firm repatriates current earnings and prior earnings previously designated as PRE, it experiences a large increase in its effective tax rate because it is recognizing U.S. tax expense on current period foreign earnings and on foreign earnings recognized in an earlier accounting period. Thus, as an alternative measure of the financial reporting cost of repatriation, we calculate *ETRhit* as the tax expense recognized in the financial statements if all PRE were

repatriated divided by earnings before taxes.[28] This variable measures the decrease in the effective tax rate the firm would experience if it repatriated all foreign earnings designated as PRE.

We report the results of estimating Equation (1) measuring *Capital Market Pressure* with *ETRhit* in Table 8. *ETRhit* has the advantage that it measures the financial reporting cost of repatriating relative to pre-tax earnings and that it is a separate measure from the tax cost of repatriating eliminating the need for the interaction with *RepCost*. Therefore, the coefficient on *ETRhit* measures the financial reporting cost of repatriating on repatriations, after controlling for the tax cost of repatriating. The results in Table 8 suggest that repatriations are negatively related to both the tax cost of repatriating ($z=-2.01$) and the financial reporting cost of repatriating ($z=-2.90$). These results provide additional support for our hypothesis that financial reporting costs deter repatriations.

7.   *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 MNCs incur a tax liability upon repatriation 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 that has received

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[28] Since we do not know the affiliates where the PRE is located we have to estimate the tax credit the firm would generate if it repatriated all of its PRE. Specifically, *ETRhit* is defined as the estimated incremental tax due upon repatriation (PRE*0.35 less [(PRE/UFE in low tax affiliates)*accumulated taxes paid in low-tax affiliates]) over pre-tax book income (Compustat PI). Mean (Median5) *ETRhit* is 33.11% (4.23%) with a standard deviation of 34.05%.

little attention 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 by designating them as permanently reinvested earnings (PRE) under APB 23. Instead, the firm recognizes the expense in the period that it repatriates those earnings or it no longer considers them permanently reinvested. Firms under capital market pressure to report higher earnings have an incentive to delay repatriation to avoid recognizing the tax expense in the financial statements. In this paper, we find that the capital market incentive to report higher earnings to shareholders is a factor that affects repatriation behavior. Specifically, we find that public firms, which face capital market pressures to increase earnings, are more sensitive to the tax cost of repatriation than private firms. Further, we find that public firms that have high amounts of PRE, and therefore a high financial reporting cost of repatriating, are more sensitive to the tax cost of repatriating than other public firms. 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. Our findings also suggest that financial reporting costs help explain the large surge in repatriations under the AJCA because the financial reporting cost, along with the cash tax cost, was temporarily reduced.

Many studies use logits, probits, and/or tobits to test their hypotheses. Because these are all nonlinear models, interpreting the coefficient estimates requires calculating their marginal effects. Statistical software easily calculates these marginal effects. However, Ai and Norton [2003] show that traditional statistical software incorrectly estimates the marginal effects of interaction terms in these models. They develop detailed equations of the correct calculation of the marginal effect of interaction terms in logit and probit models, and make the Stata program for these estimates available online. Although they note that tobits have the same problem as logits and probits, they do not formally develop equations or programs for these estimates. Our review of the literature suggests that many studies either do not attempt to properly estimate the marginal effects for interaction terms from tobits or apply Ai and Norton's method incorrectly to the tobit. In this Appendix, we provide our estimates of the marginal effects of the interaction terms as well as our Stata code to help researchers apply these estimates properly.

To estimate the marginal effect of our interaction terms, we follow McDonald and Moffitt [1980] and their decomposition of the tobit coefficients into the effect conditional on being uncensored and the effect on the probability of being uncensored. McDonald and Moffitt show that the marginal effect of a non-interacted variable on the unconditional expected value (or the total marginal effect) is:

$$\text{TME} = \partial Ey/\partial X_1 = F(z)\beta_1, \tag{A1}$$

where, y is the dependent variable, X_1 is the independent variable of interest, and $z=X\beta/\sigma$. Because we want to estimate the marginal effect of the interaction between X_1 and X_2, where X_1 is a continuous variable and X_2 is a dichotomous variable, we want $\partial Ey/\partial X_1\partial X_2$. This estimate requires taking the difference between A1 evaluated with X_1 equal to the mean and X_2 equal to one and A1 evaluated with X_1 equal to the mean and X_2 equal to zero.[29] Therefore we define:

$\text{xb1} = \beta_0 + \beta_1 * \overline{X_1} + \beta_2 * 1 + \beta_3 * \overline{X_1} * 1$, and
$\text{xb0} = \beta_0 + \beta_1 * \overline{X_1} + \beta_2 * 0 + \beta_3 * \overline{X_1} * 0$.

The total marginal effect of the interaction term is:

$$\text{TME}_{int} = F(\text{xb1}/\sigma)*(\beta_1+\beta_3) - F(\text{xb0}/\sigma)*(\beta_1)$$

McDonald and Moffitt decompose the total marginal effect into the marginal effect on the probability of being uncensored and the marginal effect conditional on being uncensored. They show that the marginal effect on the probability of being uncensored for a non-interacted variable is:

$$\text{PU} = \partial F(z)/\partial X_1 = f(z)\beta_1/\sigma. \tag{A2}$$

---

[29] For simplicity, we show equations using only one continuous variable (e.g. the tax costs of repatriating) and one dichotomous variable (e.g. *Public*). We include all control variables in Equation (1) by setting them equal to their mean in the definitions of xb1 and xb0.

We want to estimate the marginal effect of the interaction between X_1 and X_2, i.e. $\partial F(z)/\partial X_1 \partial X_2$. Therefore, the marginal effect of the interaction term on the probability of being uncensored is:

$PU_{int} = f(xb1/\sigma)*(\beta_1+\beta_3)/\sigma - f(xb0/\sigma)*(\beta_1)/\sigma$.

They further show that the marginal effect conditional on being uncensored is:

$CU = \partial Ey*/\partial X_1 = [1-zf(z)/F(z) - f(z)^2/F(z)^2]$. $\qquad\qquad$ (A3)

We want to estimate the marginal effect conditional on being uncensored for an interaction term. Therefore, we estimate $\partial Ey*/\partial X_1 \partial X_2$ which we calculate as:

$$CU_{Int} = (\beta_1 + \beta_3)\left[1 - \frac{\left(\frac{xb1}{\sigma}\right) \times f(xb1/\sigma)}{F(xb1/\sigma)} - \frac{[f(xb1/\sigma)]^2}{[F(xb1/\sigma)]^2}\right] - \beta_1\left[1 - \frac{\left(\frac{xb0}{\sigma}\right) \times f(xb0/\sigma)}{F(xb0/\sigma)} - \frac{[f(xb0/\sigma)]^2}{[F(xb0/\sigma)]^2}\right]$$

We use the nlcom command in Stata to estimate the three marginal effects defining *div* as scaled dividends from foreign affiliates, *repcost* as the tax cost of repatriating, *public* as an indicator variable equal to one for public firms, and *pub_cost* as the interaction of *repcost* and *public*.[30] Our Stata code is as follows:

```
tobit div repcost public pub_cost, ll(0);
dtobit, brief;
sum repcost;
local meancost: di %5.2f r(mean);
gen xb1 = _b[repcost]*`meancost'+_b[public]*1+_b[pub_cost]*`meancost'*1+_b[_cons];
gen xb0 = _b[repcost]*`meancost'+_b[public]*0+_b[pub_cost]*`meancost'*0+_b[_cons];
gen z = ((xb1)/_b[_se]);
gen z0 = ((xb0)/_b[_se]);

/* Estimate the marginal effect on the unconditional expected value*/
nlcom normden(-((0-(xb1))/_b[_se]))*((_b[repcost]+_b[pub_cost]*1)/_b[_se])-normden(-((0-
(xb0))/_b[_se]))*((_b[repcost]+_b[pub_cost]*0)/_b[_se]);
/*Estimate the marginal effect on the probability uncensored*/
nlcom normden(-((0-(xb1))/_b[_se]))*((_b[repcost]+_b[pub_cost]*1))-normden(-((0-
(xb0))/_b[_se]))*((_b[repcost]+_b[pub_cost]*0));
/*Estimate the marginal effect on the conditional expected value*/
nlcom (_b[repcost]+_b[pub_cost]*1)*(1-((z*normden(z))/norm(z))-
((normden(z)*normden(z))/(norm(z)*norm(z))))
-_b[repcost]*(1-((z0*normden(z0))/norm(z0))-
((normden(z0)*normden(z0))/(norm(z0)*norm(z0))));
```

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[30] We first use nlcom to replicate the three marginal effects produced by the dtobit command (i.e. the unconditional expected value, the probability uncensored, and the expected value conditional on being uncensored) for non-interacted variables. We then expand the nlcom statement to incorporate an interaction. This process allows us to verify that our nlcom statement correctly calculates the three marginal effects.

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FIGURE 1
Tax and Financial Reporting Effects of Repatriation

	I	II	III	IV	V
	Repatriate current earnings	**Do not repatriate current earnings & do *not* designate as PRE**	**Do not repatriate current earnings & designate as PRE**	**Repatriate current & prior earnings previously designated as PRE**	**Repatriate current & prior earnings *not* previously designated as PRE**
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 repatriation tax	Recognize foreign tax & expected repatriation tax	Recognize foreign tax	Recognize foreign tax on current earnings & actual repatriation tax on current & prior earnings	Recognize foreign tax on current earnings & actual repatriation tax on current earnings
Tax paid	Foreign tax + Repatriation tax	Foreign tax	Foreign tax	Foreign tax + Repatriation tax'	Foreign tax + Repatriation tax
Overall Relative Magnitude of Effects					
After-tax earnings	Middle	Middle	High	Low	Middle
Repatriation tax cost	Middle	Zero	Zero	High	High

Tax paid refers to the cash outflow for taxes on foreign earnings. *Foreign tax* refers to the foreign income tax paid to foreign taxing jurisdictions on foreign earnings. *Repatriation tax* refers to the residual U.S. income tax paid on foreign earnings upon repatriation (U.S. tax' > U.S. tax). *Current and prior earnings* refer to total current period and prior period foreign earnings, respectively. *After-tax earnings* refer to the after-tax earnings of the U.S. consolidated entity. *Repatriation tax cost* is the residual U.S. tax due on repatriated foreign earnings.

FIGURE 2

Regression Variables

Variable Name	Definition and Source (BEA unless otherwise noted)
Dependent Variables	
Repatriations	Current year repatriations from foreign affiliates scaled by current year worldwide sales
Low (High) Repatriations	Current year repatriations from low (high) tax affiliates. Low (high) tax affiliates are those where *Affiliate Creditable Tax Rate* is less than (greater than) 30 percent scaled by worldwide sales. *Affiliate Creditable Tax Rate* equals the aggregate foreign taxes paid on undistributed foreign earnings from the year the affiliate first enters the BEA sample or 1982, whichever is later, to the current year divided by undistributed pre-tax foreign earnings aggregated over the same period.
Variables of Interest	
Capital Market Pressure	
H1: Public	Equals 1 if publicly-traded equity, 0 otherwise
H2: HighPre	Equals 1 if the ratio of permanently reinvested earnings divided by total assets of low tax affiliates ≥ 1, 0 otherwise
RepCost	An estimated of the U.S. tax the firm would owe if it repatriated all unremitted foreign earnings, computed as the U.S. statutory rate (35 percent) minus *Affiliate Creditable Tax Rate*. We estimate unremitted foreign earnings as the cumulative amount of foreign earnings minus dividends paid from the year the affiliate first enters the BEA sample or 1982, whichever is later.
Firm-Level Control Variables	
Foreign Growth	3-yr historical foreign sales growth by country, industry, weighted by affiliate assets in country, industry
U.S. Growth	3-yr historical domestic sales growth by industry
Size	Natural logarithm of undistributed pre-tax foreign earnings
Low (High) Size	Natural logarithm of undistributed pre-tax foreign earnings in low (high) tax affiliates
Lag Repatriations	Prior year repatriations scaled by prior year worldwide sales
Lagged Low (High) Repatriations	Prior year repatriations from low (high) tax affiliates scaled by prior year worldwide sales

FIGURE 2 CONT'D
Regression Variables

U.S. Leverage	Ratio of domestic short-term and long-term debt to domestic equity
Foreign Leverage	Ratio of foreign short-term and long-term debt to foreign equity
U.S. Interest	Domestic interest paid divided by domestic short-term and long-term debt
Foreign Interest	Foreign interest paid divided by foreign short-term and long-term debt
Foreign Cash	Foreign cash scaled by current year worldwide sales
%Foreign Sales	Ratio of foreign sales to worldwide sales
U.S. Loss	An indicator variable equal to 1 if the parent reports a current period domestic pre-tax loss, 0 otherwise
Mandatory Dividend	Country-level indicator variable equal to 1 if the country requires that dividends are paid to shareholders, 0 otherwise - weighted by the number of affiliates in each type of country (La Porta et al. [1998]). Available at: http://www.economics.harvard.edu/faculty/shleifer/dataset)
Corruption	Country-level variable ranging from 1 to 10 indicating high and low corruption, respectively, weighted by the number of affiliates in each type of country (La Porta et al. [1999]). Available at: http://www.economics.harvard.edu/faculty/shleifer/dataset).
Infrastructure	Country-level variable ranging from 1 to 10 indicating low and high quality infrastructure, respectively, weighted by the number of affiliates in each type of country (La Porta et al. [1999]). Available at: http://www.economics.harvard.edu/faculty/shleifer/dataset)
Capital Control	Country-level indicator variable equal to 1 if the country restricts firms' ability to take funds out of the country, 0 otherwise, weighted by the number of affiliates in each type of country (IMF [2006]).

TABLE 1
Sample Composition

Panel A: Bureau of Economic Analysis

	Affiliates	Parents
In BEA data between 1999 and 2004	57,164	4,840
Less parents without 6 consecutive years of data	(12,709)	(2,283)
Less parents without 6 consecutive years of affiliate reporting	(11,259)	(1,752)
Less ADRs	(519)	(22)
Less foreign incorporated parents	(1,399)	(48)
Less banks and insurance companies	(3,433)	(65)
Less pass-through entities	(409)	(10)
Less public entities not in Compustat for 6 consecutive years	(1,126)	(61)
Less firms missing BEA data	(147)	(8)
Less firms whose parents cannot be identified[a]	(704)	(14)
Total	25,459	577
Private Entities	1,790	98
Public Entities	23,669	479

Panel B: Compustat Sample

	Parents
Domestically incorporated firms in Compustat between 1999	10,858
Less parents without 6 consecutive years of data	(5,436)
Less parents with no foreign activity during the sample period	(3,885)
Less firms not reporting in BEA	(1,058)
Plus firms in BEA with no foreign activity during the sample	76
Less ADRs	(22)
Less banks and insurance companies	(34)
Less firms with foreign incorporated parents	(16)
Less firms missing BEA data items	(4)
Total	479

Panel C: Industry Composition of Sample

	Private	Public
1. Mining and construction	Combined	3.5%
2. Food	10.2%	4.4%
3. Textiles, printing and publishing	13.3%	12.1%
4. Chemicals	10.2%	8.4%
5. Pharmaceuticals	Combined	2.3%
6. Extractive industries	7.1%	5.0%
7. Durable manufacturing	22.5%	25.5%
8. Computers	5.1%	12.1%
9. Transportation	5.1%	5.4%
11. Retail	13.3%	16.5%
13. Insurance and real estate	Combined	Combined
14. Services	7.1%	3.8%
15. Other and Combined low reporting industries[b]	6.1%	1.0%

TABLE 1 CONT'D

Panel D: Country Composition By Region

	Private		Public	
	% of Affiliates	*% of Assets*	*% of Affiliates*	*% of Assets*
North America	13.26%	11.29%	6.43%	8.89%
Central and South America	15.35%	20.85%	16.02%	14.13%
Europe	46.99%	56.00%	51.44%	59.79%
Africa	1.85%	0.40%	2.97%	1.42%
Middle East	1.33%	0.88%	1.43%	0.96%
Asia	21.22%	10.59%	21.71%	14.82%

Panel E: Top Countries

	Private		Public	
	% of Affiliates	*% of Assets*	*% of Affiliates*	*% of Assets*
1	UK	UK	UK	UK
2	Canada	Canada	Canada	Netherlands
3	Netherlands	UK Caribbean	Germany	Canada
4	Germany	Netherlands	Netherlands	Germany
5	Mexico	Germany	France	Bermuda
6	France	France	Mexico	Luxembourg
7	Japan	Bermuda	Japan	Japan
8	Australia	Switzerland	Australia	Ireland
9	Belgium	Australia	Italy	Switzerland
10	Singapore	Brazil	Spain	Belgium

[a] Includes four mutual companies, four firms that changed status during the sample period (i.e., public to private, foreign ownership to domestic ownership, etc.) and six firms whose parents we could not identify as domestic or foreign owned.
[b] Any industries with less than five observations are combined with the "Other" category

TABLE 2
Descriptive Statistics

	Private Firms N = 522			Low PRE Public Firms N = 2,322			High PRE Public Firms N = 333		
Panel A: Regression Variables									
Variable	Mean	Med5	Std. Dev.	Mean	Med5	Std. Dev.	Mean	Med5	Std. Dev.
Repatriations (%)	0.83***	0.00	2.35	0.71*	0.00	1.86	0.92	0.00	1.98
High Repatriations (%)	0.18*,###	0.00	0.72	0.30***	0.00	0.86	0.27	0.00	0.79
Low Repatriations (%)	0.36###	0.00	1.04	0.16	0.00	0.62	0.26	0.00	0.67
RepCost (%)	10.26*,###	6.97	10.51	11.30	10.09	10.20	11.52	10.52	10.10
Foreign Growth (%)	7.07***,###	4.74	17.78	11.62***	4.47	31.71	20.90	4.10	46.76
U.S. Growth (%)	4.73##	3.52	5.55	5.46	4.21	5.91	4.92	3.50	5.33
Size	11.70***,###	11.64	1.66	13.07***	12.94	2.00	14.06	13.84	1.95
High Size	7.69***,###	10.38	5.33	10.22***	11.67	4.93	12.26	12.73	3.58
Low Size	9.07***,###	10.92	4.85	11.19***	12.40	4.64	12.87	13.24	3.43
U.S. Leverage (%)	0.60***	0.32	1.64	0.73***	0.38	1.84	1.37	0.42	3.74
Foreign Leverage (%)	2.16***,##	0.83	4.13	1.79***	0.94	2.99	1.25	0.69	2.41
U.S. Interest (%)	7.46	5.34	12.11	8.05	5.46	12.05	7.83	6.02	10.32
Foreign Interest (%)	4.31#	3.63	6.20	5.16	3.23	10.35	4.85	3.00	9.63
Foreign Cash (%)	2.22***,###	0.92	4.00	3.32***	1.38	5.63	4.86	2.14	9.63
%Foreign Sales (%)	28.38***	24.32	20.09	29.82***	27.60	19.76	35.77	33.20	19.27
U.S. Loss (%)	19.16	0.00	39.39	18.13	0.00	38.54	19.22	0.00	39.46
Mandatory Dividend (%)	1.04***,###	0.00	3.49	1.84	0.00	4.03	1.81	0.14	2.52
Corruption	6.78#	7.06	2.62	6.59	6.76	1.99	6.64	6.66	1.39
Infrastructure	5.66#	5.85	2.37	5.48	5.64	1.82	5.51	5.54	1.38
Capital Control (%)	4.71	0.00	11.77	5.34	0.00	10.67	5.21	0.00	7.60
Panel B: Comparable Tax Rate Estimates									
DFH Tax Rate (%)	27.50***,###	28.01	7.18	25.91	26.41	6.44	25.54	25.45	5.14
Current FTR (%)	24.60***	20.43	21.94	25.92**	22.98	22.78	28.95	26.92	21.84
Affiliate Creditable Tax Rate (%)	29.53***,#	27.90	18.61	27.92	24.91	18.24	26.25	24.39	14.97

TABLE 2 CONT'D

	Private Firms N = 522			Low PRE Public Firms N = 2,322			High PRE Public Firms N = 333		

Panel C: BEA Descriptive Data

Variable	Mean	Med5	Std. Dev.	Mean	Med5	Std. Dev.	Mean	Med5	Std. Dev.
Prof (%)	3.89[***]	2.59	8.47	3.34[***]	3.36	11.14	1.21	2.18	12.85
Domestic Sales	1,878.21[***,###]	588.30	4,959.04	6,124.54	1,850.70	15,392.47	5,001.21	1,698.51	9,236
Foreign Sales	775.33[***,###]	151.44	2,865.00	3,118.92	528.33	12,588.02	3,381.00	683.13	7,988
Affiliates	9.08[***,###]	3.00	24.17	22.71[**]	8.00	49.01	28.58	13.00	38.16
High Affiliates	2.15[***,###]	1.00	4.51	5.72[***]	2.00	11.13	7.79	2.33	9.46
Affiliates Indirectly-Owned (%)	11.48[***,###]	0.00	21.11	19.79[***]	4.26	25.45	38.14	37.78	31.21
PRE/Low Affiliate Assets (%)	N/A	N/A	N/A	25.90[***]	8.74	32.35	100.00	100.00	0.00
Affiliate RepDum (%)	14.66[***,###]	0.00	26.16	11.54	0.00	19.81	10.28	0.19	16.10
Parent RepDum (%)	37.93[***,###]	0.00	48.57	45.05	0.00	49.76	49.55	16.67	50.07

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 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. Low PRE public firms are those where the ratio of *PRE/Low Affiliate Assets* < 1 (i.e., *HighPre* = 0). High PRE public firms are those where the ratio of *PRE/Low Affiliate Assets* ≥ 1 (i.e., *HighPre* = 1). Med5 or Median5 represents the average of the five median observations. We report all statistics at the parent level. *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]. *Current FTR* 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. *Affiliate Creditable Tax Rate* is the U.S. parent's creditable taxes upon repatriation estimated as the average of the affiliates' creditable tax rates. The affiliate's creditable tax rates equal aggregate foreign taxes paid on undistributed foreign earnings from the year the affiliate first enters the BEA sample or 1982, whichever is later, to the current year divided by undistributed pre-tax foreign earnings aggregated over the same period. *Prof* is the profit margin for the aggregate parent-affiliate group (i.e., domestic net income + foreign net income/domestic sales + foreign sales). *Domestic (Foreign) Sales* are total domestic (foreign) sales (in millions). *Affiliates* is the total number of affiliates in a parent-affiliate group. *High 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 *Affiliate Creditable Tax Rate*. *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. *PRE/Low Affiliate Assets* is the ratio of permanently reinvested earnings reported in the 10-K (not applicable to private sample) to total assets in low tax affiliates. *Affiliate RepDum* is the proportion of affiliates in a group that pay a dividend to the U.S. parent. *Parent RepDum* is the proportion of parents that repatriate from at least one of their foreign affiliates. All other variables are defined in Figure 2. *, **, *** (#, ##, ###) represents significant differences between the high PRE (low PRE) public firms at the 10%, 5% and 1% two-tailed level, respectively.

TABLE 3
Capital Market Pressure and Annual Repatriations

Dependent Variable = Repatriations

	(1)	(1a)	(1b)	(1c)	(2)	(2a)	(2b)	(2c)
RepCost	0.0221 (0.0218)	0.0079	0.0065	0.3277	-0.0097 (0.0073)	-0.0035	-0.0028	-0.1494
Public	-0.0034 (0.0029)	-0.0013	-0.0010	-0.0515				
Public × RepCost	-0.0385[*] (0.0232)	-0.0150	-0.0128	-0.5955				
HighPre					0.0014 (0.0033)	0.0005	0.0004	0.0214
HighPre × RepCost					-0.0540[***] (0.0194)	-0.0191	-0.0145	-0.7893
Foreign Growth	0.0026 (0.0021)	0.0009	0.0008	0.0383	0.0024 (0.0022)	0.0008	0.0007	0.0362
U.S. Growth	-0.0029 (0.0152)	-0.0010	-0.0009	-0.0433	-0.0003 (0.0149)	-0.0001	-0.0001	-0.0049
Size	0.0049[***] (0.0005)	0.0017	0.0014	0.0709	0.0052[***] (0.0005)	0.0019	0.0015	0.0804
Lag Repatriations	0.6831[***] (0.0609)	0.2449	0.1993	10.1201	0.6138[***] (0.0606)	0.2194	0.1788	9.4864
U.S. Leverage	0.0007[*] (0.0003)	0.0002	0.0002	0.0101	0.0008[*] (0.0004)	0.0003	0.0002	0.0131
Foreign Leverage	0.0002 (0.0002)	0.0001	0.0000	0.0022	0.0001 (0.0002)	0.0000	0.0000	0.0020
U.S. Interest	-0.0007 (0.0071)	-0.0003	-0.0002	-0.0106	-0.0017 (0.0075)	-0.0006	-0.0005	-0.0268
Foreign Interest	-0.0111 (0.0079)	-0.0040	-0.0032	-0.1647	-0.0085 (0.0074)	-0.0030	-0.0025	-0.1315

TABLE 3 CONT'D

	(1)	(1a)	(1b)	(1c)	(2)	(2a)	(2b)	(2c)
Foreign Cash	-0.0067	-0.0024	-0.0020	-0.0998	-0.0121	-0.0043	-0.0035	-0.1871
	(0.0143)				(0.0113)			
%Foreign Sales	0.0162***	0.0058	0.0047	0.2395	0.0137***	0.0049	0.0040	0.2122
	(0.0048)				(0.0052)			
U.S. Loss	-0.0037**	-0.0013	-0.0011	-0.0538	-0.0043***	-0.0015	-0.0012	-0.0652
	(0.0016)				(0.0017)			
Mandatory Dividend	0.0381**	0.0136	0.0111	0.5640	0.0421***	0.0150	0.0123	0.6505
	(0.0181)				(0.0193)			
Corruption	-0.0006	-0.0002	-0.0002	-0.0083	-0.0088	-0.0032	-0.0026	-0.1364
	(0.0111)				(0.0107)			
Infrastructure	-0.0058	-0.0021	-0.0017	-0.0870	0.0069	0.0025	0.0020	0.1072
	(0.0126)				(0.0114)			
Capital Control	-0.0133	-0.0048	-0.0039	-0.1966	-0.0098	-0.0035	-0.0028	-0.1511
	(0.0093)				(0.0103)			
Intercept	-0.0668***	-0.0239	-0.0195	-0.9896	-0.0759***	-0.0271	-0.0221	-1.1728
	(0.0078)				(0.0084)			
Scale	0.0252***				0.0241***			
	(0.0015)				(0.0015)			
Year Fixed Effects	Yes				Yes			
Industry Fixed Effects	Yes				Yes			
Log Likelihood	2461.09				2198.42			
N	3,177				2,655			

*, **, *** significant at the 10%, 5% and 1% two-tailed level, respectively. Robust standard errors are reported in parentheses. Columns (1) and (2) report coefficients from the tobit estimation. Columns (1a) and (2a) report the marginal effect of each variable on the unconditional expected value of *Repatriations*. Columns (1b) and (2b) report the marginal effect of each variable on the expected value of *Repatriations* conditional on being uncensored. Columns (1c) and (2c) report the marginal effect of each variable on the probability uncensored. See the Appendix for more details on these calculations. See Figure 2 for variable definitions.

TABLE 4

Capital Market Pressure and Annual Repatriations from Low Tax Affiliates

Dependent Variable = Low Repatriations

	(1)	(1a)	(1b)	(1c)	(2)	(2a)	(2b)	(2c)
RepCost	-0.0132*	-0.0026	-0.0029	-0.1515	-0.0219***	-0.0044	-0.0048	-0.2807
	(0.0080)				(0.0075)			
Public	-0.0077**	-0.0018	-0.0018	-0.0959				
	(0.0033)							
HighPre					-0.0079***	-0.0013	-0.0016	-0.0891
					(0.0018)			
Foreign Growth	0.0007	0.0001	0.0002	0.0083	0.0013	0.0003	0.0003	0.0170
	(0.0021)				(0.0021)			
U.S. Growth	-0.0183	-0.0036	-0.0040	-0.2112	-0.0060	-0.0012	-0.0013	-0.0768
	(0.0188)				(0.0173)			
Low Size	0.0043***	0.0008	0.0009	0.0493	0.0040***	0.0008	0.0009	0.0507
	(0.0006)				(0.0006)			
Lag Low Repatriations	0.2811***	0.0553	0.0610	3.2359	0.5093***	0.1012	0.1110	6.5192
	(0.1012)				(0.0591)			
High Repatriations	0.7291***	0.1435	0.1583	8.3936	0.7063***	0.1403	0.1540	9.0406
	(0.1162)				(0.1044)			
U.S. Leverage	0.0007*	0.0001	0.0002	0.0081	0.0009**	0.0002	0.0002	0.0113
	(0.0004)				(0.0004)			
Foreign Leverage	-0.0002	0.0000	0.0000	-0.0021	-0.0005	-0.0001	-0.0001	-0.0059
	(0.0003)				(0.0003)			
U.S. Interest	-0.0010	-0.0002	-0.0002	-0.0120	-0.0012	-0.0002	-0.0003	-0.0156
	(0.0066)				(0.0067)			
Foreign Interest	0.0010	0.0002	0.0002	0.0115	0.0048	0.0010	0.0011	0.0620
	(0.0092)				(0.0081)			

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TABLE 4 CONT'D

	(1)	(1a)	(1b)	(1c)	(2)	(2a)	(2b)	(2c)
Foreign Cash	0.0047	0.0009	0.0010	0.0540	0.0033	0.0007	0.0007	0.0426
	(0.0044)				(0.0040)			
%Foreign Sales	0.0101*	0.0020	0.0022	0.1166	0.0053	0.0011	0.0012	0.0681
	(0.0053)				(0.0047)			
U.S. Loss	-0.0002	0.0000	0.0000	-0.0021	-0.0012	-0.0002	-0.0003	-0.0146
	(0.0019)				(0.0017)			
Mandatory Dividend	0.0659***	0.0130	0.0143	0.7588	0.0611***	0.0121	0.0133	0.7825
	(0.0191)				(0.0166)			
Corruption	0.0040	0.0008	0.0009	0.0459	-0.0033	-0.0006	-0.0007	-0.0416
	(0.0139)				(0.0110)			
Infrastructure	-0.0138	-0.0027	-0.0030	-0.1589	0.0031	0.0006	0.0007	0.0391
	(0.0161)				(0.0112)			
Capital Control	-0.0263***	-0.0052	-0.0057	-0.3030	-0.0143*	-0.0028	-0.0031	-0.1830
	(0.0096)				(0.0079)			
Intercept	-0.0598***	-0.0118	-0.0130	-0.6890	-0.0626***	-0.0124	-0.0136	-0.8011
	(0.0089)				(0.0099)			
Scale	0.0241***				0.0218***			
	(0.0017)				(0.0016)			
Year Fixed Effects	Yes				Yes			
Industry Fixed Effects	Yes				Yes			
Log Likelihood	1651.91				1578.50			
N	3,177				2,655			

*, **, *** significant at the 10%, 5% and 1% two-tailed level, respectively. Robust standard errors are reported in parentheses. Columns (1) and (2) report coefficients from the Tobit estimation. Columns (1a) and (2a) report the marginal effect of each variable on the unconditional expected value of *Repatriations*. Columns (1b) and (2b) report the marginal effect of each variable on the expected value of *Repatriations* conditional on being uncensored. Columns (1c) and (2c) report the marginal effect of each variable on the probability uncensored. See the Appendix for more details on these calculations. See Figure 2 for variable definitions.

TABLE 5
Descriptive Statistics for Quarterly Repatriations

Panel A: Univariate Analysis of Public versus Private Quarterly Repatriation Behavior				
	Repatriation Indicator	Repatriations	QTR Prof	High Repatriations	Low Repatriations
Private Firms N=522					
QTR1	6.18[**,###]	0.15[##]	7.97[***]	0.04[**]	0.08
QTR2	7.03[**,###]	0.17[##]	9.13[***,##]	0.04[**]	0.11[**,###]
QTR3	5.16	0.13	9.37[***]	0.02[**,#]	0.10
QTR4	7.64[**,###]	0.20[*]	8.84[***]	0.03[***,##]	0.15
Public/Low PRE Firms N=2,322					
QTR1	4.19	0.11	6.13[***]	0.03[***]	0.07
QTR2	4.47	0.12	6.61[***]	0.04[***]	0.07
QTR3	4.69	0.12[*]	7.78[***]	0.03[***]	0.08
QTR4	5.17	0.20[***]	6.87[***]	0.04[***]	0.14
Public/High PRE Firms N=333					
QTR1	3.83	0.14	0.93	0.07	0.05
QTR2	4.05	0.13	-0.71	0.06	0.06
QTR3	4.46	0.17	1.10	0.07	0.07
QTR4	4.87	0.30	-0.64	0.09	0.17

Panel B: Descriptive Statistics for Q4RepPct			
	Mean	Median5	Std. Dev.
Private Firms N=522	10.51%[***,###]	0.00%	25.38%
Public/Low PRE Firms N=2,322	14.04%	0.00%	27.44%
Public/High PRE Firms N=333	15.53%	0.00%	27.56%

This table reports descriptive data for quarterly repatriations 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 statistics of the affiliated group (i.e., the U.S. parent and foreign affiliates). *Repatriation Indicator* is equal to 1 if an affiliate repatriates foreign earnings during the quarter; zero otherwise. *QTR Prof* is foreign quarterly net income scaled by one fourth of foreign annual sales. *Q4RepPct* is defined as the ratio of repatriations in the fourth quarter to the sum of repatriations in all four quarters. See Figure 2 for definitions of all other variables. *, **, *** (#, ##, ###) represents significant differences between the high PRE(low PRE) public firms at the 10%, 5% and 1% two-tailed level, respectively.

TABLE 6

Capital Market Pressure and the Timing of Repatriations Across Quarters

Dependent Variable = Q4RepPct

	(1)	(1a)	(2)	(2a)
RepCost	0.5991	0.1587	-0.4168**	-0.1111
	(0.4620)		(0.2023)	
Public	-0.0328	-0.0089		
	(0.0809)			
Public × RepCost	-1.1206***	-0.3889		
	(0.5056)			
HighPre			0.0363	0.0100
			(0.0693)	
HighPre × RepCost			-0.8963**	-0.2560
			(0.4713)	
QTR Prof	0.0802	0.0212	0.0916	0.0244
	(0.0508)		(0.0578)	
Size	0.1444***	0.0383	0.1476***	0.0394
	(0.0097)		(0.0103)	
Intercept	-1.9567***	-0.5185	-2.0314***	-0.5419
	(0.1700)		(0.1858)	
Scale	0.5131***		0.4858***	
	(0.0214)		(0.0219)	
Year Fixed Effects	Yes		Yes	
Industry Fixed Effects	Yes		Yes	
Log Likelihood	-1580.74		-1289.92	
N	3,177		2,655	

*, **, *** significant at the 10%, 5% and 1% two-tailed level, respectively. Robust standard errors are reported in parentheses. The dependent variable, *Q4RepPct*, equals the ratio of repatriations in the fourth quarter to the sum of repatriations in all four quarters. *QTR Prof* is foreign quarterly net income scaled by one fourth of foreign annual sales. See Figure 2 for definitions of all other variables. Columns (1) and (2) report coefficients from the Tobit estimation. Columns (1a) and (2a) report the marginal effect of each variable on the unconditional expected value of *Repatriations*. See the Appendix for more details on these calculations.

TABLE 7
Capital Market Pressures and Foreign Cash Holdings

Dependent Variable = LN(Cash/Net Assets)

	(1)	(2)
RepCost	-0.3303	-0.5724
	(0.6736)	(0.6637)
HighPre	0.1161	0.1296
	(0.1401)	(0.1330)
HighPre × RepCost	3.5864**	3.3680***
	(1.2914)	(1.2718)
Foreign Growth	-0.0272	-0.0373
	(0.1214)	(0.1107)
U.S. Growth	-2.5005	-2.7353*
	(1.8092)	(1.6239)
Size	0.2355***	0.2132***
	(0.0298)	(0.0280)
Foreign Leverage		-0.0432
		(0.0281)
Foreign Investment		6.3657***
		(1.2683)
U.S. Loss		0.1496*
		(0.0874)
Mandatory Dividend		-1.5633
		(1.4396)
Corruption		1.0785
		(0.6925)
Infrastructure		-1.6909**
		(0.7679)
Capital Control		0.0363
		(0.4165)
Intercept	-7.6032***	-7.0728***
	(0.4539)	(0.5235)
Year Fixed Effects	YES	YES
Industry Fixed Effects	YES	YES
Adj. R-sq	21.87%	25.74%
N	2,655	2,655

*, **, *** significant at the 10%, 5% and 1% two-tailed level, respectively. Robust standard errors from OLS regressions reported in parentheses. *LN(Cash/Net Assets)* is the natural log of foreign cash divided by non-cash firm assets. *Foreign Investment* is foreign capital expenditures plus foreign R&D investment divided by total firm assets. See Figure 2 for definitions of all other variables.

TABLE 8
Alternate Proxy for Capital Market Pressure

Dependent Variable = Repatriations

	(1)	(1a)	(2)	(2a)
RepCost	-0.0241***	-0.0087	-0.0140**	-0.0050
	(0.0070)		(0.0070)	
ETRHit	-0.0026***	-0.0009	-0.0028***	-0.0010
	(0.0010)		(0.0010)	
PreDum	0.0025	0.0009	0.0020	0.0007
	(0.0016)		(0.0016)	
Foreign Growth	0.0228***	0.0082	0.0017	0.0006
	(0.0060)		(0.0022)	
U.S. Growth	-0.0029	-0.0010	0.0012	0.0004
	(0.0032)		(0.0150)	
Size	0.0055***	0.0020	0.0050***	0.0018
	(0.0005)		(0.0005)	
Lag Repatriations	0.6186***	0.2218	0.6173***	0.2204
	(0.0626)		(0.0596)	
U.S. Leverage			0.0008***	0.0003
			(0.0004)	
Foreign Leverage			0.0001	0.0004
			(0.0002)	
U.S. Interest			-0.0007	-0.0003
			(0.0077)	
Foreign Interest			-0.0080	-0.0029
			(0.0077)	
Foreign Cash			-0.0128	-0.0046
			(0.0147)	
%Foreign Sales			0.0145***	0.0052
			(0.0053)	
U.S. Loss			-0.0041**	-0.0014
			(0.0017)	
Mandatory Dividend			0.0428**	0.0153
			(0.0191)	
Corruption			-0.0105	-0.0037
			(0.0108)	
Infrastructure			0.0090	0.0032
			(0.0.0114)	
Capital Control			-0.0097	-0.0034
			(0.0105)	
Intercept	-0.0781***	-0.0280	-0.0755***	-0.0270
	(0.0078)		(0.0084)	

TABLE 8 CONT'D

	(1)	(1a)	(2)	(2a)
Scale	0.0241***		0.0242***	
	(0.0005)		(0.0015)	
Year Fixed Effects	YES		YES	
Industry Fixed Effects	YES		YES	
Log Likelihood	2193.22		2195.46	
N	2,655		2,655	

*, **, *** significant at the 10%, 5% and 1% two-tailed level, respectively. Robust standard errors from Tobit regressions reported in parentheses. Columns (1a) and (2a) report the marginal effect of each variable on the unconditional expected value of *Repatriations*. *ETRHit* is the estimated impact on the firm's ETR if all PRE was repatriated. It is defined as the estimated incremental tax due upon repatriation (PRE*0.35 less [(PRE/UFE in low tax affiliates)*accumulated taxes paid in low-tax affiliates]) over pre-tax book income (Compustat PI). See Figure 2 for definitions of all other variables.

The Rodney L. White Center for Financial Research

The Wharton School
University of Pennsylvania
3254 Steinberg Hall-Dietrich Hall
3620 Locust Walk
Philadelphia, PA 19104-6367

(215) 898-7616
(215) 573-8084 Fax
http://finance.wharton.upenn.edu/~rlwctr

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