

# The Location, Composition, and Investment Implications of Permanently Reinvested Earnings

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**Abstract:** This study estimates the location, composition, and investment implications of permanently reinvested earnings (PRE) reported in U.S. multinational corporations' (MNCs) consolidated financial statements. Our first set of analyses suggest that firms' PRE designations are motivated by both financial reporting incentives (i.e., tax expense deferral) and investment opportunities. Our second set of analyses find that domestic investment by MNCs with PRE is less responsive to domestic investment opportunities and more sensitive to domestic cash flow than firms without PRE, consistent with PRE indicating internal capital market frictions. We conclude that financial statement users could benefit from enhanced disclosures about foreign operations.

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In April 2014, eBay Inc. announced that it recognized a \$3 billion tax charge associated with \$9 billion of its foreign earnings. Wall Street, the press, and legislators inferred that this announcement indicated that eBay had “repatriated” these \$9 billion in foreign earnings to the U.S. and remitted roughly \$3 billion to the U.S. Treasury. The general tenor of the discussion surrounding eBay’s announcement was the U.S.’s system of worldwide taxation was not as large an impediment to U.S. firm’s operations and that, given time, U.S. multinationals will eventually bring foreign earnings back into the U.S. without any additional rate cuts or tax holidays. However, eBay Inc. didn’t actually repatriate any of its foreign earnings into the U.S. Said another way, no cash flowed across the U.S. border and into the U.S. tax coffers. Rather, the company simply reversed its designation of its foreign earnings as being indefinitely or “permanently” reinvested abroad.

These permanently reinvested earnings or “PRE” generally refer to unremitted foreign earnings for which a firm has not recognized an expense in its consolidated financial statements to reflect the residual U.S. tax that will be due upon repatriation of those earnings. This accounting treatment, which is not elective, applies if specific facts and circumstances suggest the foreign earnings will be reinvested outside the U.S. indefinitely (FASB 2009, specifically paragraph 740-30-25-17). The unremitted earnings can be held in cash, or reinvested in non-liquid assets. The residual U.S. tax liability is generally equal to foreign pre-tax earnings times the difference between the U.S. and foreign tax rates and recognition of the potential U.S. tax expense is deferred until the earnings are repatriated to the U.S. parent or the earnings are no longer considered indefinitely reinvested. MNCs must report the amount of PRE and an estimate of the repatriation tax in their financial statement footnotes.

PRE became the focus of national attention under the terms of the repatriation tax holiday enacted in the American Jobs Creation Act of 2004 (AJCA). The AJCA, enacted to incentivize firms to repatriate unremitted foreign earnings and invest them in the U.S. economy, created a one-time dividend received deduction that reduced the U.S. tax on foreign earnings from 35 to 5.25 percent on extraordinary repatriations up to \$500 million or PRE disclosed in the most recent financial statements. The reference to PRE in this legislation as a limit on receiving the reduced rate suggests that PRE is viewed by tax policy makers as an approximation of trapped cash abroad. A presumption that PRE represents trapped cash has permeated the conventional wisdom leading the public to view PRE as a liquid source of funds. The notion that PRE represent a liquid source of funds has also contributed to the controversy surrounding inversions. For example, Americans for Tax Fairness argue that the Pfizer/Allergan inversion - a complex tax planning transaction that shifts the firm's country of incorporation to a low tax foreign country - would have resulted in Pfizer lending its foreign earnings to Allergan therefore circumventing approximately \$35 billion in U.S. taxes. Notice that this conjecture presupposes that Pfizer's PRE was cash or cash equivalents. In this paper, we challenge this assumption.

In addition to the public and the press, the Securities and Exchange Commission (SEC) has issued comment letters inquiring about cash held in foreign subsidiaries where earnings are designated as PRE, and a Senate Finance Committee report about Apple Inc.'s tax planning points to growth in PRE as a cause for concern (Levin and McCain 2013). Finally, the Financial Accounting Standards Board (FASB) decided on March 23, 2016 to conduct outreach to "determine the operability of disclosing the aggregate [cash related to undistributed earnings that are permanently reinvested]". In light of the attention focused on PRE, this study investigates

what PRE can tell us about the tax policy, financial reporting, and investment implications of MNC's foreign operations.

The confusion surrounding PRE is attributable to the fact that these earnings are reported on a firm-level basis, rather than by subsidiary, country, segment, or type of asset and convey little about MNCs' foreign operations or the impact of those operations on firms' domestic liquidity. Despite this lack of detail, PRE attracts the attention of regulators and policy makers because it is one of only a few required disclosures about foreign operations and it has increased rapidly in recent years. Ciesielski (2012) reveals in his Senate testimony that aggregate PRE for S&P 500 firms is \$1.542 trillion at the end of 2011, and that "in the space of five years (2006 through 2011), the balance of indefinitely reinvested earnings more than doubled, growing at an average rate of 20% per year" (pg. 2). Tax policy makers view this increase in PRE as a consequence of the U.S. worldwide system with deferral coupled with a high corporate tax rate relative to other countries. While PRE are only a subset of total unremitted foreign earnings, the focus on PRE arises from its visibility in public company financial statements, its usefulness as an estimate of unremitted foreign earnings, and the belief that it represents both a potential influx of cash into the U.S. economy and a potential source of U.S. tax revenue.

Interest in PRE stems from the potential unrecognized U.S. tax liability associated with these foreign earnings. For example, the SEC is concerned that investors lack details regarding the proportion of cash held abroad and the implications of U.S. taxation for the accessibility and general corporate use of foreign cash. According to Mark Shannon, an SEC accountant in the Division of Corporate Finance, the SEC seeks to ensure "that companies are telling consistent stories about offshore versus domestic liquidity" (Whitehouse 2011). To this aim, the SEC began asking MNCs questions about the effect of PRE and repatriation taxes on domestic liquidity as

early as 2009. Implicit in recent SEC disclosure requests is the concern that MNCs with a significant amount of PRE have an impaired ability to finance domestic investment with foreign cash. However, the relation between PRE and domestic liquidity are unclear because not all PRE is held in cash, and not all foreign cash comes from PRE.

We investigate what PRE can tell us about the tax policy, financial reporting, and investment implications of firms' foreign operations by conducting two sets of tests. First, we investigate the location of PRE (i.e. the extent to which PRE are held in tax haven and/or high growth affiliates that more likely to have plans for reinvestment) and the composition of PRE (i.e. the extent to which PRE are held in cash versus non-cash assets) to evaluate the importance of two specific circumstances – investment opportunities and tax considerations – that motivate PRE designations. We study the location of PRE by estimating the relation between PRE and assets held in affiliates with characteristics of interest and the composition of PRE by estimating the relation between PRE and specific types of assets. To the extent that tax deferral or tax expense deferral motivates PRE designations, we expect to observe a high concentration of PRE in cash assets and in tax havens. To the extent that investment opportunities motivate PRE designations, we expect to observe a high concentration of PRE in non-cash assets and in high growth affiliates.

Second, we investigate the extent to which PRE are associated with internal capital market frictions to better understand the investment implications of PRE. We investigate the investment implications of PRE by estimating how both PRE and an estimate of PRE held in cash affect domestic investment. Existing research finds evidence that investment by multi-segment firms – e.g., those operating in multiple industries – is not directed to segments with the best investment opportunities and relies more heavily on the segment's own cash flow than the cash flow of other segments (Shin and Stulz 1998; Ozbas and Scharfstein 2010). Viewing MNCs as multi-segment

firms with a domestic segment and a foreign segment, we test whether the sensitivity of domestic investment to domestic investment opportunities and domestic cash flows vary with PRE. We also test whether other characteristics of firms' foreign operations – foreign cash and an estimate of PRE held in cash – have similar effects on domestic investment.

We note several important findings. First, we estimate that 24 percent of PRE is held in tax havens and 39 percent of PRE is held in high growth affiliates. We also estimate that 54 (46) percent of PRE is held in cash (non-cash) assets and 14 percent of PRE is held in cash assets in tax havens. These results suggest that both tax and growth considerations are important in PRE designations and provide some reference points to evaluate how firms might respond to tax policy reform. To the extent that PRE are held in cash assets in tax havens, the potential tax liability upon repatriation of those earnings is greater, and tax policy reform aimed at stimulating repatriation (e.g., a tax rate reduction) will be more effective. To the extent that PRE are held in high growth affiliates, firms are less likely to be responsive to tax reform intended to stimulate repatriation. Since 14 percent of PRE, or about \$113 billion for our sample in 2009, is associated with cash assets in tax havens, our results suggest the potential for substantial repatriation given the right tax incentives. However, our estimate that 39 percent of PRE is held in high growth affiliates suggests the importance of considering specific circumstances that motivate PRE designations when evaluating the implications of firms' PRE.

We further find that as PRE invested in cash assets increases, domestic investment becomes less sensitive to domestic investment opportunities and more sensitive to domestic cash flows. These results are stronger in a sample of firms facing financial constraints. These findings imply inefficiencies in internal capital markets for MNCs with PRE held in cash assets and generally

support recent trends in SEC requests for enhanced disclosure of foreign cash directed at firms with PRE.

Our detailed examination of circumstances that motivate PRE designations and the location and composition of PRE makes two significant contributions. First, we provide useful information about the potential economic and revenue impacts of tax reform considering reduced corporate tax rates or limits on deferral. Press reports argue that PRE includes large pools of cash “parked” in haven countries, which represent a significant untapped source of tax revenue, and funds that could be repatriated to stimulate the U.S. economy. While existing literature finds that PRE is related to tax and investment incentives (Krull 2004), it is not able to estimate the proportion of PRE invested in foreign affiliates as a result of these motivations or the type of assets in which PRE is invested. Our use of confidential data allows us to provide a clearer and more detailed picture of what PRE represent and how firms might respond to tax reform.

Second, we contribute to literature investigating the investment implications of foreign operations by studying multinational firms’ internal capital markets. Existing research finds evidence consistent with foreign cash trapped by repatriation taxes being sub-optimally invested abroad (Bryant-Kutcher, Eiler and Guenther 2008; Edwards, Kravet and Wilson 2014; Hanlon, Lester and Verdi 2014). While these studies provide evidence of inefficient foreign investment, they do not evaluate how reinvestment to avoid repatriation taxes affects the ability of firms to take advantage of profitable domestic investment opportunities. Our results provide evidence that the reinvestment of foreign earnings in cash assets reduces internal capital market efficiency.

Third, this paper addresses the misperception held by academics that PRE can proxy for foreign cash or trapped foreign cash. For example, Harris and O’Brien (2016) refer to PRE as “a standard proxy for trapped cash (p. 5).” Similarly, Harford et al. (2014) use PRE as a proxy for foreign cash.

Our results suggest that not only does cash only comprise about half of PRE, but implications for internal capital market efficiency differ for PRE and foreign cash. Thus, PRE is a poor proxy for foreign cash and trapped cash, not only because PRE is comprised of both cash and more productive, less liquid operating assets, but also because reinvested earnings is just one of several sources of cash. Therefore, results of studies that use PRE as a proxy for foreign cash or trapped cash must be interpreted with caution.

## **I. Background and Motivation**

### *A. What are Permanently Reinvested Earnings (PRE)?*

The U.S. tax system allows tax deferral on active income earned abroad. Tax deferral moves the timing of the taxation of foreign affiliate earnings to the same period in which the affiliate repatriates the earnings to the U.S. parent. The amount of tax due at the time of repatriation equals the dividend grossed-up for foreign taxes paid times the U.S. statutory tax rate minus a foreign tax credit. Generally, the foreign tax credit equals the amount of foreign income and withholding taxes paid on the repatriated earnings up to the amount of the U.S. tax liability. If the foreign tax credit is greater than the U.S. tax liability, the MNC owes no incremental tax on repatriation.

Financial accounting rules require MNCs to recognize, as an expense (and related liability), the anticipated tax consequence related to future repatriation of undistributed foreign earnings in the period those earnings are generated. However, quantifying the expected U.S. tax on undistributed earnings abroad is complex and requires estimates and assumptions that are susceptible to error or manipulation.<sup>1</sup>

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<sup>1</sup> See e.g., [http://www2.financialexecutives.org/news/finrep/letters/Dfdtax\\_Jun14.pdf](http://www2.financialexecutives.org/news/finrep/letters/Dfdtax_Jun14.pdf) (accessed January 7, 2012).

In light of this complexity, Accounting Principles Board Opinion No. 23 (hereafter APB 23) creates an exception to the general rule described above. This exception (hereafter, the Indefinite Reversal Exception) is now defined in FASB ASC 740 (2009) (formerly FAS 109) and exempts firms from immediate expense recognition if “sufficient evidence shows that the subsidiary has invested or will invest the undistributed earnings indefinitely or that the earnings will be remitted in a tax-free liquidation” (ASC 740-30-25-17).<sup>2</sup>

The Indefinite Reversal Exception is not an ‘election’ per se, but rather applies if specific facts and circumstances suggest that the earnings will be reinvested outside the U.S. indefinitely. Specifically, the exception states that:

“A parent entity shall have evidence of specific plans for reinvestment of undistributed earnings of a subsidiary which demonstrate that remittance of the earnings will be postponed indefinitely...Experience of the entities and definite future programs of operations and remittances are examples of the types of evidence required to substantiate the parent entity's representation of indefinite postponement of remittances from a subsidiary.” (ASC 740-30-25-17)

In practice, however, these criteria are sufficiently ambiguous such that identical facts and circumstances could lead to different designations of PRE. For instance, Krull (2004) documents that PRE reflects investment and tax incentives, but also finds that amounts reported as PRE are used to manage after-tax earnings.

Moreover, the Indefinite Reversal Exception operates at the affiliate level; i.e., a parent company need not assert that the undistributed earnings of all foreign affiliates are permanently reinvested to avoid income tax expense recognition. It can apply the exception to some affiliates

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<sup>2</sup> The Indefinite Reversal Exception applies broadly to temporary differences between the tax basis and the financial reporting basis of an investment in the stock of a foreign affiliate (i.e., an outside basis difference). Undistributed earnings of a foreign affiliate increase the book basis of the shares of the affiliate in the hands of the domestic parent and is the most common item giving rise to outside basis differences. Other items, such as differing book and tax bases of shares in a newly acquired foreign target, also give rise to outside basis differences. Because undistributed earnings is the most common item giving rise to outside basis differences, we refer to amounts for which the firm has invoked the Indefinite Reversal Exception as permanently reinvested earnings, or PRE.

and not others. It can also apply the exception to each affiliate using a year-by-year, or a dollar-by-dollar approach (Smith 2010).<sup>3</sup>

When a firm avails itself of the Indefinite Reversal Exception, it is required to report in its financial statements the dollar amount of undistributed earnings for which it has not recognized an expense for the expected tax consequences of repatriation. The amount of PRE disclosed is cumulative over time and aggregated across all foreign affiliates. Since firms make PRE designations at the affiliate level but only disclose aggregate PRE across all foreign affiliates, the information conveyed by a firm's disclosure does not reflect the richness of information used to determine the amount of PRE.

#### *B. Interest in PRE by Tax Policy Makers*

Tax policy makers are scrutinizing firms' PRE designations because they represent a potential source of tax revenue that corporations have become adept at avoiding. The concern is that current tax laws allow firms to defer most (if not all) income taxes on foreign earnings. This concern was highlighted in a hearing conducted by the Permanent Subcommittee on Investigations of the U.S. Senate Homeland Security and Government Affairs Committee in 2013. The hearing focused on how Apple Inc. used foreign entities to legally avoid paying U.S. tax on \$30 billion of profits in one entity and \$70 billion in another over a four-year period.

A memorandum to the committee states "At the same time as the U.S. federal debt has continued to grow – now surpassing \$16 trillion – the U.S. corporate tax base has continued to decline, placing a greater burden on individual taxpayers and future generations...Over the past several years, the amount of permanently reinvested foreign earnings reported by U.S.

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<sup>3</sup> The year-by-year approach means that a firm can change its PRE assertion related to undistributed earnings from a prior period to the extent that facts change over time. The dollar-by-dollar approach means that a firm can assert a portion of the earnings as PRE, while at the same time anticipating a future distribution of the remaining portion.

multinationals on their financial statements has increased dramatically.” (Levin and McCain, 2013). In response to declining corporate tax revenues, some policy makers have proposed limiting deferral, which would reduce the incentive to defer repatriation, and/or reducing the corporate income tax rate, which would decrease the cost of repatriation.

The ability of PRE to aid in evaluating either micro- or macro-level effects of proposed tax reform – i.e., how much firms would repatriate and how much tax the U.S. would collect – depends on our understanding of where PRE is held (i.e. low-tax or high-tax affiliates) and the types of assets in which it is held (i.e. cash versus non-cash assets). For instance, the potential tax revenue from a limit or repeal of tax deferral is greater when all PRE is held in low-tax jurisdictions than if half is held in low-tax jurisdictions and half is held in high-tax jurisdictions.<sup>4</sup> Similarly, the potential repatriation of PRE is also greater if PRE is held in cash assets than if it is held in non-cash assets. Our study strives to provide a more detailed picture of what PRE represent to help researchers and policy makers better interpret this accounting figure.

### *C. Interest in PRE by Financial Regulators*

Though accounting standards have required disclosures regarding the amount of PRE since 1972 and the amount of tax on PRE since 1993, the SEC has recently taken a significant interest in PRE disclosures. In particular, the SEC has been questioning firms about the liquidity effects of indefinitely reinvesting foreign earnings and requesting that registrants consider the effect on liquidity when they assert their intention to indefinitely reinvest earnings under ASC 740.<sup>5</sup>

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<sup>4</sup> Note that repatriations come from pools of earnings that have been aggregated over time. Hence, some current repatriations have been subject to significant foreign tax rates.

<sup>5</sup> The SEC issued Release 33-9144 in September 2010, interpretive guidance intended to improve discussion of liquidity and capital resources in Management’s Discussion and Analysis of Financial Condition and Results of Operations in order to facilitate understanding by investors of the funding and liquidity risks facing the registrant. Among other things, Regulation S-K requires that these disclosures include information about the nature of any limits or restrictions and their effect on the company’s ability to use or to access it cash or other investments to fund its business operations.

Moreover, the SEC staff has requested that many of these firms disclose the amount of cash and short-term investments held by foreign subsidiaries that are not available to fund domestic operations unless the funds are repatriated, as well as the potential income tax payments that would be required upon repatriation.

For example, the SEC sent the following request to Caterpillar<sup>6</sup>:

“We refer to your disclosure on page A-111 that you have undistributed profits that are indefinitely reinvested outside the U.S. If significant to an understanding of your liquidity, please clarify the amount of cash and cash equivalents held outside of the U.S. Additionally, to the extent material, please describe any significant amounts that may not be available for general corporate use related to the cash and investments held by foreign subsidiaries where you consider earnings to be indefinitely invested” (Correspondence between SEC and Caterpillar, May 10, 2011, File No. 001-0076).

Their response is as follows:

“At December 31, 2010 we held approximately \$2.3 billion in cash outside the U.S. and approximately \$1.3 billion in cash inside the U.S. Substantially all of our cash and investments held by foreign subsidiaries where we consider earnings to be indefinitely reinvested is available for general corporate use. However, as disclosed on page A-104, we expect to meet our U.S. funding needs without repatriating non-U.S. cash and incurring incremental U.S. taxes. As such, we believe that disclosure of the amount of cash and investments held outside the U.S. is not significant to an understanding of our liquidity. (Correspondence between SEC and Caterpillar Inc., May 10, 2011, File No. 001-0076).

Relatedly, Jill Davis, associate chief accountant in the SEC’s Division of Corporate Finance, noted (at the 2010 AICPA conference) PRE could indicate that a significant proportion of an MNC’s consolidated cash balance is not available to fund its domestic operations without incurring a significant tax obligation. To better understand the issues important to the SEC, we compare MNCs that received comment letters to those that did not. We find that MNCs receiving comment letters report higher levels of PRE, have lower effective tax rates, and operate in more low-tax (including tax haven) countries than MNCs not receiving a letter. However, firms that received a

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<sup>6</sup> We identified this example by searching SEC correspondence reports for the terms ‘unremitted’, ‘permanently reinvested’, ‘undistributed’, or ‘indefinitely reinvested’, and ‘liquidity’ or ‘cash’ and our use of this example does not imply that this firm is represented in our confidential BEA sample (see Section III.A).

comment letter do not have significantly higher worldwide cash holdings than other firms. These results suggest that the SEC's concern is that PRE represents earnings and cash in low-tax jurisdictions and that MNCs' consolidated cash holdings do not properly reflect their ability to fund domestic operations. We report these findings in more detail in Appendix A.

#### *D. Interest in PRE by Academics*

The facts and circumstances that underlie PRE designations are also important to understand as researchers. Many existing studies are forced to make assumptions about the location of PRE and/or use PRE to proxy for characteristics of foreign operations such as foreign cash and trapped cash. For example, Graham et al. (2011) and Harris and O'Brien (2016) use PRE to proxy for foreign cash effectively trapped abroad to investigate the importance of expense deferral in explaining foreign cash and domestic mergers and acquisitions, respectively. Harford et al. (2014) use PRE to proxy for foreign cash to study domestic investment. Blouin et al. (2012) use PRE to test whether the earnings effects of repatriation are an important factor in MNCs' repatriation decisions. The authors initially assume that all PRE are located in low tax jurisdictions and then test alternate assumptions because the amount of PRE in low tax subsidiaries is not reported. The extent to which the assumptions of these studies hold influences the inferences we can draw from their results.

Figure 1 Panel A illustrates the importance of distinguishing between PRE, foreign cash, and unremitted foreign earnings. First, recall that PRE represents that aggregate book-tax basis difference in the U.S. parent's investment in its foreign subsidiaries. Unremitted foreign earnings often represent a substantial amount of this difference. However, other transactions such as purchase accounting adjustments also create basis differences (Smith 2010). Moreover, not all unremitted earnings are designated as PRE. Therefore, PRE intersects unremitted foreign earnings,

but neither is contained entirely within the other. Second, while firms will invest unremitted earnings in cash when investment opportunities are low, they will reinvest these earnings in productive assets until investment opportunities run out. Therefore PRE intersects foreign cash, but is not contained entirely within it. Third, not all foreign cash is acquired through earnings. Debt issues and parent investment also increase foreign cash. Therefore, some foreign cash lies outside of PRE and unremitted foreign earnings.

In Panel B, we add a circle representing unremitted earnings on which a significant U.S. tax will be due upon repatriation. The contents of this circle can be thought of as trapped cash and or trapped earnings. It intercepts PRE and foreign cash, but excludes portions of both of these constructs to represent PRE and foreign cash held in high or moderately taxed subsidiaries and foreign cash obtained through means other than earnings. Understanding these associations is important when researchers consider using PRE as a proxy for trapped cash and locked out earnings. Our study attempts to shed light on the extent to which the constructs represented in Figure 1 overlap.

## **II. Hypothesis Development**

As described in Sections I.B and I.C, constituents scrutinizing PRE focus on the implications of PRE for firms' tax payments, financial statement earnings, liquidity, and investment decisions. These concerns contain a common thread – PRE is generally believed to represent cash assets earned in low-tax jurisdictions that are not available for domestic needs without incurring a tax cost (e.g., see Ciesielski, 2012). However, Caterpillar notes in its response to the SEC that, “disclosure of the amount of cash and investments held outside the U.S. is not significant to an understanding of our liquidity” (see above). Caterpillar and many other U.S. MNCs argue with the

SEC in their correspondence that the firm can meet its domestic funding needs through other means (such as borrowing) and that significant PRE does not preclude the firm from funding its U.S. operations.

Competing views of the SEC and MNCs regarding the link between PRE and liquidity present several interesting empirical questions. First, to what extent is PRE held in low-tax affiliates that would generate a large U.S. tax liability upon repatriation? Second, to what extent is PRE held in cash assets that would be subject to a tax liability before it can be accessed in the U.S.? Third, does PRE (or PRE held in cash) have any implications for financing the domestic operations of U.S. MNCs?

We next develop hypotheses to answer these questions. Although PRE is an accounting construct, the designation of earnings as PRE is based on the underlying economics. The criteria for designating earnings as PRE state that MNCs must have sufficient evidence “that the subsidiary has invested or will invest the undistributed earnings indefinitely or that the earnings will be remitted in a tax-free liquidation.” MNCs can use past experience, forecasted future operations, and repatriation patterns as evidence to support a PRE assertion. We develop hypotheses by focusing on circumstances that motivate indefinite reinvestment and warrant a PRE designation.

#### *A. Location and Composition of PRE*

One circumstance that might lead to a PRE designation is reinvestment of earnings to defer U.S. tax on those earnings in a way such that repatriation of the earnings is postponed indefinitely. Existing research documents that MNCs use tax strategies, such as investment in tax havens (Dyreng and Lindsey, 2009 and Hines and Rice, 1994), to avoid or defer U.S. cash tax on foreign earnings. Tax haven countries are a subset of low-tax countries that provide companies with opportunities for tax avoidance. Thus, to the extent that tax deferral is a circumstance that

motivates the designation of foreign earnings as permanently reinvested, we expect to find a higher proportion of assets in tax havens, relative to non-tax havens, designated as PRE. Moreover, as firms continue to reinvest abroad to defer U.S. taxes, investment exceeds profitable opportunities and the reinvestment is more likely to occur in financial assets. Thus, we expect to find a higher proportion of financial assets designated as PRE in tax havens relative to non-havens. We test the following hypotheses, stated in null form:

H<sub>1a</sub>: The proportion of assets in tax havens designated as PRE is not significantly different from the proportion of assets in non-havens designated as PRE.

H<sub>1b</sub>: The proportion of cash assets in tax havens designated as PRE is not significantly different from the proportion of cash assets in non-havens designated as PRE.

Another circumstance that might lead to PRE designation is expectations about future growth and expansion abroad. Existing research finds that U.S. investment abroad is increasing in expected growth (e.g., Desai, Foley and Hines 2007), and that, assuming after-tax returns and tax rates are constant over time, firms will reinvest in overseas operations rather than repatriate to the U.S. when the foreign after-tax return is greater than the domestic after-tax return (Hartman 1985). This research suggests that MNCs will reinvest more in affiliates with higher growth. As growth increases, the expected length of investment likely increases as well, improving MNCs' ability to make a PRE assertion. Thus, to the extent that growth opportunities are a circumstance that motivates PRE, we expect to find a higher proportion of assets in high growth affiliates, relative to low growth affiliates, designated as PRE. Moreover, we expect this investment to be in non-cash assets. We test the following hypotheses, stated in null form:

H<sub>2a</sub>: The proportion of assets in high growth affiliates designated as PRE is not significantly different from the proportion of assets in low growth affiliates designated as PRE.

H<sub>2b</sub>: The proportion of non-cash assets in high growth affiliates designated as PRE is not significantly different from the proportion of non-cash assets in low growth affiliates designated as PRE.

### *B. Investment Implications of PRE*

Next, we examine the relation between PRE and domestic investment at the firm-level. This analysis allows us to evaluate the SEC's implicit assumption that PRE represent internal capital that is not available for domestic needs without incurring a tax cost. It is worth noting that even if PRE primarily represents cash assets held in tax havens, it is not a foregone conclusion that firms with PRE are precluded from funding their domestic operations.

The SEC's concern appears related to MNCs' internal capital markets. As shown in Table 1 Panel A column 3, firms with PRE hold approximately 15 percent of their total assets in cash and cash equivalents. Thus, U.S. MNCs have cash; the issue is how much of that cash represents foreign cash and PRE held as cash and whether it can (and will) be used to finance domestic operations at a reasonable cost. The internal capital market literature in finance examines whether firms distribute capital efficiently across segments, i.e. whether the existence of multiple (diversified) segments helps the firm overcome financing constraints.

In our setting, and in light of the SEC concerns regarding PRE and liquidity, a U.S. MNC can be viewed as two divisions, or business segments - domestic and foreign. We then ask whether PRE signals the existence of frictions that limit the efficient mobility of capital *from* the foreign segment *to* the domestic segment. Extant work in finance finds that having multiple segments within the same firm can facilitate investment because cash rich segments can finance investment opportunities of other segments. Said another way, diversification can result in segment investment having a greater responsiveness to investment opportunities with less reliance on its own cash flow. Conversely, if diversification creates internal capital market frictions, investment by multi-segment firms will be less responsive to investment opportunities and more reliant on own segment cash flows (see e.g. Lamont 1997; Shin and Stulz 1998; Ozbas and Scharfstein 2010).

In a multinational context, existing research finds that repatriations are decreasing in the U.S. tax on repatriations (Hines and Hubbard 1990; Altshuler and Newlon 1993; Grubert 1998; Desai, Foley, and Hines 2001, 2007) and that this effect is exacerbated by financial reporting concerns (Blouin et al. 2012; Graham, Hanlon, and Shevlin 2011). If the tax or financial reporting consequences of repatriating PRE impede the mobility of capital from foreign jurisdictions into the U.S., domestic investment by firms with PRE will be less responsive to domestic investment opportunities and more responsive to domestic cash flow. Alternatively, if firms with PRE have extensive options through which to finance domestic investment (as indicated by Caterpillar in Section I.C), then we would instead observe that domestic investment is more or similarly responsive to domestic investment opportunities and less or similarly responsive to domestic cash flow for these firms.

This discussion leads to the following hypothesis, stated in null form:

H<sub>3a</sub>: There is no significant difference in the responsiveness of domestic investment to domestic investment opportunities and domestic cash flows in firms with and without PRE.

Finally, we consider whether it is the intersection between PRE and foreign cash that attenuates a MNC's sensitivity of domestic investment to domestic investment opportunities and increases the sensitivity of domestic investment to domestic cash flow. As the SEC seems to be particularly interested in MNCs liquidity, we investigate the following hypothesis, stated in null form:

H<sub>3b</sub>: There is no significant difference in the responsiveness of domestic investment to domestic investment opportunities and domestic cash flows as PRE held in cash increases.

### **III. Data and Sample Selection**

#### *A. BEA Data*

To obtain information on assets held in specific foreign affiliates of U.S. MNCs, as well as data on the domestic operations of each MNC, we use confidential data from the Annual

(Benchmark) Survey of U.S. Direct Investment Abroad conducted by the BEA. Federal law obligates U.S. MNCs to report financial and operating data for both domestic and foreign operations to the BEA for the purpose of producing aggregate statistics on U.S. direct investment abroad.<sup>7</sup> The amount of data collected by the BEA varies by year and depends on whether the affiliate meets a reporting threshold; thresholds in benchmark years (i.e., 1999, 2004, and 2009) are lower so the information is more complete.<sup>8</sup>

To conduct our analyses, we aggregate foreign assets within various groups of affiliates sharing common characteristics of interest. We aggregate domestic and foreign assets within each MNC to compute worldwide assets. MNCs report to the BEA on a fiscal year basis and follow U.S. Generally Accepted Accounting Principles (GAAP), with the exception of consolidation rules. Whereas GAAP requires consolidation for equity investments of more than 50 percent, the BEA requires that the MNC use the equity method of accounting for all equity investments. This means that we can cleanly separate the assets of a parent company from the assets of its affiliates. The intercompany investment account also allows us to avoid double-counting assets in the consolidation process.<sup>9</sup>

In addition, some MNCs' foreign affiliates are owned by other foreign affiliates either instead of, or in conjunction with, the U.S. parent. When we observe these tiered ownership structures, we

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<sup>7</sup> The BEA defines a U.S. MNC as the combination of a single U.S. entity, called the U.S. parent, and at least one foreign affiliate in which the U.S. parent holds, directly or indirectly, a ten percent interest. However, only a small proportion of affiliates in our sample are owned less than 100 percent.

<sup>8</sup> In order to reduce the reporting burden, the BEA requires the filing of a survey form for an affiliate if its assets, sales, or net income (loss) exceed \$7 million in 1999, \$30 million in 2000-2003, \$10 million in 2004, and \$40 million in 2005-2008. During 2000-2003, and 2005-2008 (i.e., non-benchmark years), some of the financial and operating data that we observe for small affiliates not required to participate in the survey is estimated by the BEA.

<sup>9</sup> For example, under the equity method of accounting used for BEA reporting, the total assets of the domestic operation will include the 'net assets' or equity investment in all foreign affiliates. Thus, a measure of worldwide assets necessitates that we remove the investment in foreign affiliates from domestic assets, and instead include aggregate total assets of foreign affiliates with domestic assets. This mimics the result that would be achieved if the MNCs assets were consolidated under GAAP. Total assets computed using BEA data and total assets in Compustat are highly correlated ( $p = 0.998$ ).

focus on the financial position of the lower-tier entities (and do not attribute the financial positions of a lower-tier entity to its owner). For instance, when an affiliate is directly owned by another affiliate, the assets of the lower-tier entity are considered in our analysis and the proportion of the upper-tier entity's assets attributable to the lower-tier entity are removed from the upper-tier. The BEA data provides information on ownership structures, as well as intercompany investment accounts, allowing us to make these adjustments.

### *B. Sample Selection*

To test our hypotheses surrounding the location, composition, and investment implications of PRE, we require information on assets held in specific foreign affiliates of U.S. MNCs, as well as data on the domestic operations of each MNC. Thus, we begin by constructing a sample of 68,523 firm-years (10,803 firms) in Compustat from 1998 through 2009 with publicly traded equity, excluding REITs, banks, insurance, and foreign-owned entities.<sup>10</sup> We label this the Compustat sample in Table 1 Panel A. As the focus of our study is on MNCs, we further restrict the sample to 18,931 firm-years (2,227 firms) with potentially significant foreign operations. We label this the MNC sample.

To manage the data collection process (which includes a text search followed by manual extraction of PRE amounts) we identify our MNC sample as those reporting an absolute value of foreign income tax expense (TXTO) exceeding \$1 million. Then we use a text search program to scan the SEC 10-K filings of our MNC sample for disclosures of PRE.<sup>11</sup> This results in a sample of 11,503 firm-years (1,315 firms) disclosing PRE, which we label the PRE sample.<sup>12</sup> Finally, we

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<sup>10</sup> We end our sample period in 2009 because this is the latest year for which BEA data is available.

<sup>11</sup> We use variations on the following search terms: “permanently reinvested”, “indefinitely reinvested”, “undistributed”, and “unremitted foreign earnings”. We confirm the accuracy of our dataset constructed using a text search by comparing PRE amounts to a hand-collected dataset of PRE (from Blouin et al. 2012) consisting of 475 MNCs (3,376 firm-years). There are no differences in PRE across the two datasets.

<sup>12</sup> We recognize that Ayers, Schwab, and Utke (2015) interpret their evidence as firms failing to comply with the disclosure requirements of APB 23. Nevertheless, we are interested in understanding the location and composition of

combine this PRE sample with firms in the BEA data that contain all of the necessary data to compute the variables required to test our hypotheses, resulting in 5,680 firm-years (870 firms), which we label the BEA sample.

To test our hypotheses regarding the location and composition of PRE, we eliminate observations from the BEA sample that do not report PRE, resulting in a sample of 4,339 firm-years.<sup>13</sup> To test our hypotheses regarding the investment implications of PRE, we include the 1,341 observations representing firms that do not have PRE.

### *C. Descriptive Statistics*

Table 1 Panel A provides a comparison of the attributes of firms in the Compustat, MNC, PRE, and BEA samples. Overall, the data show that each sample from left to right represents successively larger firms with more material foreign operations. In addition, firms in the BEA sample (column 4), which by definition have more material foreign operations by virtue of being required to report to the BEA, have a higher ratio of PRE to assets than firms in the PRE sample.

Table 1 Panel B provides descriptive data on PRE and selected aspects of firms' foreign operations by year for the 4,339 firm-years in the BEA sample that report non-zero PRE. On average, firms in our sample report aggregate PRE of \$422 billion, which is 64 percent of foreign retained earnings and 18 percent of foreign assets. The only drop in aggregate PRE occurs in 2004 and 2005, from \$429 billion in 2003 to \$304 billion in 2005. This decrease is likely attributable to repatriation activity under the American Jobs Creation Act of 2004, which temporarily reduced the tax cost of repatriating foreign earnings. Although PRE decreases during the tax holiday, it

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reported PRE. To the extent that non-compliance with mandatory disclosure requirements is correlated with agency problems surrounding firms' foreign operations, our estimate of the extent to which PRE signals internal capital market frictions will be understated.

<sup>13</sup> Since these tests are attempting to estimate the proportion of PRE associated with assets in affiliates with specific characteristics and with certain types of assets, we exclude firms that do not have PRE from these analyses. Results are qualitatively similar when we include these firms to test  $H_1$  and  $H_2$ .

increases precipitously from 2006 onwards. Finally, the last column of Table 1 Panel B shows that PRE is growing at a faster rate than foreign cash.<sup>14</sup> One interpretation is that PRE assertions may be becoming more difficult to justify for affiliates holding cash assets.

#### IV. Research Design and Results

##### A. Research Design for Hypotheses 1 and 2 – Location and Composition of PRE

We investigate the location of PRE by estimating the association between PRE and assets held in affiliates with characteristics of interest as follows:

$$(1) \quad PRE_{i,t} = \alpha_0 + \alpha_1 Total\ Foreign\ Assets_{i,t} + \alpha_2 Characteristic\ Foreign\ Assets_{i,t} + \sum \alpha_k Year_k + \varepsilon_{i,t}.$$

*PRE* equals the amount of permanently reinvested earnings reported in a firm’s SEC 10-K filing, *Total Foreign Assets* equals a firm’s total assets in its foreign affiliates (excluding assets that represent ownership in another affiliate), and *Characteristic Foreign Assets* equals a firm’s total assets in foreign affiliates with the characteristic of interest. We scale all variables by worldwide assets. *Year* represents year fixed effects, and *i* and *t* represent firm and year subscripts, respectively. We winsorize all continuous variables at the 2nd and 98th percentiles and scale by worldwide assets. In each of our analyses, we cluster standard errors by firm.

Following from H<sub>1a</sub> and H<sub>2a</sub>, we examine two affiliate characteristics to estimate the location of PRE: haven status and growth. In defining haven status, we focus on countries that have median effective tax rates of less than 10 percent, good legal institutions, and no capital controls.<sup>15</sup> To test

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<sup>14</sup> The definition of “cash” throughout this paper, when drawn from the BEA data, refers to cash and other current assets held in foreign affiliates (other than equity in affiliates, inventory, and receivables). Thus, the BEA definition of cash is likely to be more inclusive than the definition of cash and cash equivalents under GAAP (i.e., SFAC 95), as reflected in Compustat (CHE). Moreover, the current asset categories that firms report to the BEA in 2009 are less detailed than those reported in all prior years. Consequently, we impute the inventory and accounts receivable balances in 2009 in order to remove these amounts from our BEA cash variable as defined above.

<sup>15</sup> Following the methodology described in Desai, Foley and Hines (2001), we estimate the country-level tax rate as the median of affiliates’ ratio of tax expense to pre-tax income. We eliminate affiliate observations with negative net income in our country-level tax rate estimates. We define good legal institutions as those countries with an above the

H<sub>1a</sub>, we define *Haven Foreign Assets* as the sum of each firm's total assets in the 20 countries that meet all of these requirements in any year from 1998 through 2009. To test H<sub>2a</sub>, we define *Growth Foreign Assets* as the sum of each firm's assets in foreign affiliates with R&D and capital expenditures in year t above the sample median for all affiliates in the sample in year t. We consider other definitions of a tax haven and high growth in robustness tests.

The coefficients in Equation (1) estimate how the level of PRE changes as assets in affiliates with these characteristics vary. For example, when we examine haven status, *Characteristic Foreign Assets* equals *Haven Foreign Assets*. In this case,  $\alpha_1$  in Equation (1) represents the change in the level of PRE as assets in non-haven affiliates change by one dollar, and  $\alpha_2$  represents the change in the level of PRE as assets in haven affiliates change by one dollar, incremental to the effect of assets in non-haven affiliates. Thus, the total effect of assets in haven affiliates on the level of PRE is represented by  $\alpha_1 + \alpha_2$ .<sup>16</sup>

When *Characteristic Foreign Assets* equals *Haven Foreign Assets*, a significant coefficient on  $\alpha_2$  would lead us to reject the null hypothesis that there is no significant difference in the proportion of assets in tax havens versus non-havens that are designated as PRE. When *Characteristic Foreign Assets* equals *Growth Foreign Assets*, a significant coefficient on  $\alpha_2$  would lead us to reject the null hypothesis that there is no significant difference in the proportion of assets in high growth versus low growth affiliates designated as PRE. We cannot directly observe the amount of

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sample median rule of law index (from Political Risk Services) and we use capital control data from the International Monetary Fund.

<sup>16</sup> We study the association between PRE and assets because 1) PRE is defined in ASC 740 as a basis difference, i.e. a difference between the book and tax bases of assets (FASB 2009), 2) when foreign earnings are not repatriated they are reinvested in assets, and 3) we are interested in the type of assets in which PRE are held and other potential measures are not reported by type of asset. Results of tests of H<sub>1a</sub> and H<sub>2a</sub> are qualitatively similar when we study the association between PRE and net income and retained earnings with the single exception that we do not find that a higher proportion of retained earnings are designated as PRE in tax havens.

PRE in each affiliate, so we estimate the location of PRE in our sample by estimating the amount of PRE associated with assets in affiliates with and without the characteristic of interest.

To examine whether one affiliate characteristic dominates the other in explaining PRE, we further explore the location of PRE using the following equation:

$$(2) \quad PRE_{i,t} = \alpha_0 + \alpha_1 Total\ Foreign\ Assets_{i,t} + \alpha_2 Haven\ Foreign\ Assets_{i,t} \\ + \alpha_3 Growth\ Foreign\ Assets_{i,t} + \sum \alpha_k Year_k + \varepsilon_{i,t}$$

All variables in Equation (2) are defined as in Equation (1). Equation (2) differs by allowing each characteristic to compete, thus testing whether each is significant, controlling for the other.

We examine the asset composition of PRE by estimating the association between PRE and cash versus non-cash assets held in foreign affiliates. To do so, we estimate the following equation:

$$(3) \quad PRE_{i,t} = \beta_0 + \beta_1 Total\ Foreign\ Assets_{i,t} + \beta_2 Cash\ Foreign\ Assets_{i,t} + \sum \beta_k Year_k + \varepsilon_{i,t}$$

*Cash Foreign Assets* equals the subset of *Total Foreign Assets* (defined above) held in the form of cash. All other variables are defined in Equation (1) and we interpret the coefficient estimates in a similar manner to estimate the average amount of PRE associated with cash versus non-cash assets.

To test H<sub>1b</sub> and H<sub>2b</sub>, we combine Equations (1) and (3) to examine whether the asset composition of PRE varies with the characteristics of a firm's foreign affiliates. Thus, we estimate the association between PRE and cash versus non-cash assets held in tax havens and growth affiliates as follows:

$$(4) \quad PRE_{i,t} = \beta_0 + \beta_1 Non-Cash\ Foreign\ Assets_{i,t} + \beta_2 Cash\ Foreign\ Assets_{i,t} \\ + \beta_3 Characteristic\ Non-Cash\ Foreign\ Assets_{i,t} \\ + \beta_4 Characteristic\ Cash\ Foreign\ Assets_{i,t} + \sum \beta_k Year_k + \varepsilon_{i,t}$$

This equation disaggregates *Total Foreign Assets* into *Non-Cash Foreign Assets* and *Cash Foreign Assets*. *Characteristic Cash Foreign Assets* (*Characteristic Non-Cash Foreign Assets*)

equals *Cash Foreign Assets* (*Non-Cash Foreign Assets*) summed across a firm's affiliates with the characteristic of interest.

We study the same two characteristics we examine in Equation (1): haven status and growth. When *Characteristic Cash Foreign Assets* equals *Haven Cash Foreign Assets*,  $\beta_2$  in Equation (4) represents the change in the level of PRE as cash in non-haven affiliates changes by one dollar, and  $\beta_4$  represents the change in the level of PRE as cash in haven affiliates changes by one dollar, incremental to the effect of cash in non-haven affiliates. The total effect of cash in haven affiliates on the level of PRE is represented by  $\beta_2 + \beta_4$ .

This specification allows us to test whether cash in haven affiliates has a significantly different association with PRE than cash in non-haven affiliates, as well as to observe the relative magnitudes of PRE held in these assets. When *Characteristic Cash Foreign Assets* is cash held in tax havens, a significant  $\beta_4$  would lead us to reject the null hypothesis that there is no significant difference in the proportion of cash assets in tax havens versus non-havens designated as PRE. When *Characteristic Non-Cash Foreign Assets* is non-cash assets held in high growth affiliates, a significant  $\beta_4$  would lead us to reject the null hypothesis that there is no significant difference in the proportion of non-cash assets in high growth affiliates versus low growth affiliates designated as PRE.

#### *B. Results for Hypotheses 1 and 2 – Location and Composition of PRE*

Table 2 Panel A reports descriptive statistics for our variables of interest in the multivariate tests of  $H_{1a}$ ,  $H_{1b}$ ,  $H_{2a}$ , and  $H_{2b}$  for firms with ( $PRE\ Firm = 1$ ) and without ( $PRE\ Firm = 0$ ) PRE. We find that firms with PRE have more total foreign assets, assets in tax havens, and assets in high growth affiliates. They also hold more cash in tax havens and high growth affiliates.

Table 3 reports the results of estimating the location of PRE. Panel A reports the results of estimating Equation (1) using *Haven Foreign Assets* as *Characteristic Foreign Assets*. This test estimates the relation between assets in haven affiliates and PRE relative to the relation between assets in non-haven affiliates and PRE. A positive coefficient on *Haven Foreign Assets* is consistent with firms designating a higher proportion of assets as PRE in affiliates with relatively low taxed earnings abroad. The coefficient on *Total Foreign Assets* is 0.1498, which suggests that on average 14.98 percent of assets in non-haven affiliates are associated with PRE. The coefficient on *Haven Foreign Assets* suggests that 25.01 percent ( $0.1498 + 0.1003$ ) of assets in haven affiliates are associated with PRE. We reject  $H_{1a}$  because the proportion of assets associated with PRE is significantly higher in haven affiliates relative to non-haven affiliates (s.e. = 0.0347).<sup>17</sup>

Further, mean foreign assets in haven affiliates as a percentage of worldwide assets is 0.0632, and mean foreign assets as a percentage of worldwide assets is 0.3945. When we use these respective means to estimate the amount of aggregate PRE held in haven affiliates versus non-haven affiliates, we find that PRE held in haven affiliates is 1.58 percent of worldwide assets [ $0.0632 \times (0.1498 + 0.1003)$ ] and PRE held in non-haven affiliates is 4.96 percent of worldwide assets [ $(0.3945 - 0.0632) \times 0.1498$ ]. These estimates suggest that 24 percent of PRE is held in haven affiliates [ $1.58 / (4.96 + 1.58)$ ]. Comparatively, only 15 percent of total foreign assets are located in haven affiliates. Using aggregate PRE in 2009 of \$808 billion, this result suggests that total unremitted earnings in tax havens on which no U.S. tax liability has been recognized in the financial statements is \$192 billion ( $\$808 \text{ billion} \times 0.24$ ) at the end of 2009.<sup>18</sup>

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<sup>17</sup> We also estimate Equations (1) through (4) excluding the intercepts and find similar results. For instance, we find that PRE in haven affiliates is 1.89 percent of worldwide assets and PRE in non-haven affiliates is 7.05 percent, suggesting that 21 percent of PRE is located in haven affiliates and 79 percent is located in non-haven affiliates. In addition, the coefficient on *Haven Foreign Assets* is positive and significant (0.1003; s.e. = 0.0347).

<sup>18</sup> We also estimate Equation (1) using two definitions of a tax haven following Hines and Rice (1994). First, we consider all tax havens -Andorra, Anguilla, Antigua and Barbuda, Bahamas, Bahrain, Barbados, Belize, Bermuda, British Virgin Islands, Caymans Islands, Channel Islands (Jersey, Guernsey, Alderney), Cyprus, Dominica, Gibraltar,

Panel B reports results of estimating Equation (1) using *Growth Foreign Assets* as *Characteristic Foreign Assets*. This test estimates the effect of assets in high growth affiliates on PRE relative to assets in low growth affiliates. A positive coefficient on *Growth Foreign Assets* is consistent with firms designating a higher proportion of assets in affiliates with investment opportunities abroad as PRE. The coefficient on *Total Foreign Assets* is 0.1475, which suggests that on average 14.75 percent of assets in low growth affiliates are as associated with PRE. The coefficient on *Growth Foreign Assets* suggests that 23.33 percent ( $0.1475 + 0.0858$ ) of assets in high growth affiliates are associated with PRE. We reject  $H_{2a}$  because the proportion of assets associated with PRE is significantly higher in high growth affiliates relative to low growth affiliates (s.e. = 0.0195).<sup>19</sup>

Further, when we use the respective means to estimate the amount of aggregate PRE in high growth affiliates versus low growth affiliates, we find that PRE in high growth affiliates is 2.63 percent of worldwide assets [ $0.1126 \times (0.1475 + 0.0858)$ ] and PRE in low growth affiliates is 4.16 percent of worldwide assets [ $(0.3945 - 0.1126) \times 0.1475$ ]. These estimates suggest that 39 percent of

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Grenada, Isle of Man, Liechtenstein, Luxembourg, Macao, Maldives, Malta, Marshall Islands, Monaco, Netherlands Antilles, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and Grenadines, Vanuatu, Hong Kong, Ireland, Lebanon, Liberia, Panama, Singapore, and Switzerland. The coefficient on *Haven Foreign Assets* is 0.0655 (s.e. = 0.0300) and 27 percent of PRE is located in these tax haven affiliates. Second, we consider only the Big 7 tax havens - Hong Kong, Ireland, Lebanon, Liberia, Panama, Singapore, and Switzerland. The coefficient on *Haven Foreign Assets* is 0.557 (s.e. = 0.1446) and 23 percent of PRE is located in these tax haven affiliates.

<sup>19</sup> We also estimate Equation (1) using three alternative definitions of high growth. First, we consider an affiliate high growth if its 3-year average lagged investment, defined as capital expenditures and R&D, exceeds the sample median. The coefficient on *Growth Foreign Assets* is 0.0464 (s.e. = 0.0180) and 40 percent of PRE is located in high growth affiliates. Second, we consider an affiliate high growth if its 3-year lagged industry sales growth exceeds the sample median. The coefficient on *Growth Foreign Assets* is -0.0091 (s.e. = 0.0082) and 38 percent of PRE is located in high growth affiliates. Third, we consider an affiliate high growth if the GDP growth of the country in which it operates exceeds the sample median. The coefficient on *Growth Foreign Assets* is 0.0249 (s.e. = 0.0244) and 38 percent of PRE is located in high growth affiliates. As our tests of  $H_{1b}$  are robust only for measures of growth computed at the affiliate-level (rather than the industry- or country-level), this could imply that PRE assertions motivated by growth are easier to justify to firms' external auditors when the firm is actually investing, rather than 'intending' to invest in the future. It may also imply that firms with PRE are not investing in positive NPV projects abroad, consistent with Hanlon, Lester, Verdi (2015) and Edwards, Kravet, and Wilson (2015). Note that the presence of suboptimal investment activity biases against us finding results.

PRE is located in high growth affiliates  $[2.63/(4.16+2.63)]$  and 61 percent of PRE is located in low growth affiliates  $[4.16/(4.16+2.63)]$ .

Finally, Panel C reports the results of estimating Equation (2). When *Haven Foreign Assets* and *Growth Foreign Assets* are included in the regression model simultaneously, both variables obtain a positive and significant coefficient. The coefficient on *Haven Foreign Assets* is similar in magnitude to the coefficient on *Growth Foreign Assets*, suggesting that similar proportions of assets in tax havens and growth affiliates are associated with PRE. Our finding that, relative to non-growth, non-haven affiliates, a higher proportion of assets in haven affiliates and high growth affiliates are associated with PRE is consistent with existing research that finds that PRE assertions are motivated by both tax deferral and investment (Krull 2004).

Table 4 reports the results of estimating the proportion of foreign assets designated as permanently reinvested that are held in cash versus non-cash assets. Panel A reports the results of estimating Equation (3) while Panels B and C report the results of estimating Equation (4), again using haven status and growth as our characteristics of interest. The results generally suggest that a significantly higher proportion of cash assets in foreign affiliates are associated with PRE than non-cash assets in foreign affiliates. For example, in Panel A, the coefficient on *Total Foreign Assets* is 0.1355 and the coefficient on *Cash Foreign Assets* is 0.0837. These results imply that 13.55 percent of non-cash assets in foreign affiliates are associated with PRE, while 21.92 percent  $(0.1355+0.0837)$  of cash assets are associated with PRE.

Further, as in Table 3, we use the respective means to estimate the amount of PRE held in cash versus non-cash assets, on average. In the “% of PRE” column, 54 percent of PRE is held in cash assets and 46 percent of PRE is held in non-cash assets. Panels B and C test  $H_{1b}$  and  $H_{2b}$ . In Panel B, the coefficient on *Haven Cash Foreign Assets* is 0.1121 (s.e. = 0.0609). This result suggests

that a significantly higher proportion of cash in haven affiliates is associated with PRE, relative to cash in non-haven affiliates and leads us to reject  $H_{1b}$ . Specifically, 18.49 percent of cash in non-haven affiliates is associated with PRE, whereas 29.7 ( $0.1849 + 0.1121$ ) percent of cash in haven affiliates is associated with PRE. Interpreting the coefficients consistent with the methodology described above, we find that 37 percent of PRE is held in cash in non-haven affiliates, while 14 percent of PRE is held in cash in haven affiliates. Thus, although a higher proportion of cash in haven affiliates is associated with PRE, a larger proportion of PRE is held in cash in non-haven affiliates. This result is due to the smaller amount of assets held in tax havens relative to non-havens. It also suggests that firms could feasibly repatriate large sums given the appropriate tax incentives. Specifically, this result suggests that firms hold \$113 billion ( $\$808 \text{ billion} \times 0.14$ ) of PRE in cash in tax havens in 2009. To the extent that these funds are trapped by repatriation taxes, incentives to stimulate repatriation are likely to bring these funds back to the U.S. To this same extent, cash assets held in havens are less available to finance liquidity needs than other cash assets.

Panel C reports the results of testing  $H_{2b}$ . The coefficient on *Growth Non-Cash Foreign Assets* is 0.0983 (s.e. = 0.0312). This result suggests that a significantly higher proportion of non-cash assets in high growth affiliates is associated with PRE, relative to non-cash assets in low growth affiliates and leads us to reject  $H_{2b}$ . Specifically, 10.91 percent of non-cash assets in low growth affiliates is associated with PRE, whereas 20.74 ( $0.1091 + 0.0983$ ) percent of non-cash assets in high growth affiliates is associated with PRE. Interpreting the coefficients consistent with the methodology described above, we find that 26 percent of PRE is held in non-cash assets in low growth affiliates, while 20 percent of PRE is held in non-cash assets in high growth affiliates. The lower percent of PRE in high growth affiliates is again driven by the smaller proportion of assets in those affiliates. The percentage does, however, suggest that a substantial amount of PRE would

be unlikely to be repatriated in response to tax incentives. Specifically, this result suggests that our sample firms have \$162 billion ( $0.20 * \$808$  billion) of PRE invested in non-cash assets in high growth affiliates, an amount that would likely be unresponsive to tax incentives.

The results in Panel C also suggest that MNCs designate a higher proportion of cash in high growth affiliates as PRE, relative to cash in low growth affiliates. Interpreting the coefficients, we find that 35 percent of PRE is held in cash in low growth affiliates, while 20 percent of PRE is held in cash in high growth affiliates. Thus, while we do observe that tax deferral and investment opportunities are an important considerations in PRE designations, these results do not provide convincing evidence that PRE hinder firms' ability to take advantage of profitable domestic investment opportunities. To further understand what PRE tells us about the investment implications of firms' foreign operations, we next investigate the effect of PRE on the efficiency of firms' internal capital markets.

### *C. Research Design for Hypothesis 3 – Investment Implications of PRE*

Early studies in corporate finance document the relationship between investment and liquidity by estimating the following model using panel data (e.g., Hoshi, Kashyap, and Scharfstein 1991):

$$(5) \quad I/K_{i,t} = \gamma_0 + \gamma_1 Q_{i,t} + \gamma_2 CF/K_{i,t} + \sum \gamma_k Year_k + \sum \gamma_j Industry_j + \varepsilon_{i,t},$$

Where, for each business segment,  $I$  is investment,  $K$  is capital stock at the beginning of the period,  $Q$  is Tobin's  $Q$ , and  $CF$  is a measure of cash flow. Studies that examine the efficiency of firms' internal capital markets also adopt this model (e.g., Lamont 1997; Shin and Stulz 1998; Ozbas and Scharfstein 2010). An efficient internal capital market would ensure that each segment invests regardless of its own cash flow as long as it has valuable investment opportunities. Thus, these studies generally interpret differences in  $\gamma_1$  and  $\gamma_2$  across segments that represent part of a diversified firm versus a stand-alone firm as evidence on internal capital market efficiency.

To test H<sub>3a</sub> and H<sub>3b</sub> we adopt this framework and characterize each multinational firm in our sample as having two ‘segments’ – domestic and foreign. In the presence of tax frictions (described in Section I.A), an MNC would operate its domestic segment largely independently of its foreign segment in which case we will observe two empirical patterns in the data: (i) the investment of the domestic segment will be less responsive to investment opportunities (Shin and Stulz 1998) and (ii) the domestic segment will rely more on its own cash flow than it does on the cash flow of the foreign segment to finance investment (Lamont 1997).<sup>20, 21</sup>

To examine the efficiency of MNCs’ internal capital markets, we begin by estimating the following empirical equation for a sample of 5,680 firm-years from 1998 to 2009 that report PRE and have data required to compute all variables in the following regression equation:

$$(6a) \quad \text{Domestic Investment}_{i,t} = \gamma_0 + \gamma_1 \text{Domestic } Q_{i,t} + \gamma_2 \text{Domestic } CF_{i,t} + \gamma_3 \text{Foreign } CF_{i,t} \\ + \gamma_4 \text{Total Cash}_{i,t} + \gamma_5 \text{Domestic Size}_{i,t} + \gamma_6 \text{Foreign Size}_{i,t} + \gamma_7 \text{Mature}_{i,t} \\ + \gamma_8 \text{Qdum}_{i,t} + \gamma_9 \text{Leverage}_{i,t} + \sum \gamma_k \text{Year}_k + \sum \gamma_k \text{Industry}_k + \varepsilon_{i,t}$$

In the context of our study, tax frictions deter MNCs from using cash flow from the foreign segment to finance domestic investment. Following Shin and Stulz (1998) we decompose a firm’s total cash flows into a segment’s own cash flow (i.e. domestic cash flow) and the cash flow of other segments (i.e., foreign cash flow). We therefore model the investment of the domestic segment as a function of its investment opportunities, its own cash flow, the cash flow of the foreign segment, and control variables. Consistent with existing studies, we include year and industry fixed effects and cluster standard errors by firm.

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<sup>20</sup> Note that the opposite is not true for foreign investment because repatriation tax frictions in internal capital markets prevent foreign capital from being used for domestic investment, but do not prevent domestic capital from being used for foreign investment.

<sup>21</sup> The maintained hypothesis in the literature is that external capital markets are imperfect and that internal capital markets play a nontrivial role in allocating capital. However, we consider the incremental role of external capital market frictions in Section IV.

*Domestic Investment* is domestic R&D and capital expenditures scaled by domestic assets. *Domestic Q*, our proxy for investment opportunities, is mean U.S. sales growth in each firms' primary industry over the previous three years. *Domestic CF* is domestic net income plus R&D and depreciation scaled by domestic assets. *Foreign CF* is foreign net income plus R&D and depreciation scaled by foreign assets.<sup>22</sup> A positive coefficient on each of these three variables would generally imply an efficient internal capital market.

We include six additional variables in the empirical model to control for firm characteristics that could affect domestic investment and be correlated with *Domestic Q*, *Domestic CF*, or *Foreign CF*. *Total Cash* is the ratio of worldwide cash to worldwide assets. Firms with a greater overall level of cash have the ability to invest more. *Domestic Size* is the log of domestic sales, and *Foreign Size* is the log of foreign sales. Firms with larger domestic operations may make smaller investments if their domestic operations are relatively more mature. Similarly, firms with larger foreign operations may require less investment abroad if foreign operations are relatively more mature, leaving more available for domestic investment (see Desai, Foley and Hines 2009). *Mature* is the log of the number of years since the firm made its first foreign direct investment and controls for the possibility that firms that have been abroad longer invest less because they are more mature firms. *Qdum* equals 1 when *Domestic Q* is greater than *Foreign Q*, and 0 otherwise. Firms will invest more (less) in domestic operations when *Domestic Q* is higher (lower) than *Foreign Q*. *Leverage* is the ratio of short- and long-term debt to total assets. Firms with greater external borrowing may invest less if they are more constrained.

SEC concern surrounding the ability of MNCs to finance domestic investment with foreign liquidity when firms have significant PRE has prompted a wave of requests for disclosure of the

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<sup>22</sup> These measures are consistent with those in Shin and Stulz (1998) and Ozbas and Scharfstein (2010), adapted to include R&D in domestic investment.

proportion of cash held abroad (see Section I.C). Implicit in these disclosure requests is the belief that tax frictions are potentially greater in firms with significant amounts of PRE and/or PRE invested in cash. Thus, we test H<sub>2a</sub> and H<sub>2b</sub> by interacting our variables of interest in Equation (6a), (i.e.,  $\gamma_1$ , and  $\gamma_2$ , and  $\gamma_3$ ) with measures of firms' PRE and cash, as follows:<sup>23</sup>

$$\begin{aligned}
 (6b) \quad \text{Domestic Investment}_{i,t} = & \gamma_0 + \gamma_1 \text{Domestic } Q_{i,t} + \gamma_2 \text{Domestic } CF_{i,t} \\
 & + \gamma_3 \text{Foreign } CF_{i,t} + \gamma_4 \text{Attribute}_{i,t} + \gamma_5 \text{Domestic } Q_{i,t} * \text{Attribute}_{i,t} \\
 & + \gamma_6 \text{Domestic } CF_{i,t} * \text{Attribute}_{i,t} + \gamma_7 \text{Foreign } CF_{i,t} * \text{Attribute}_{i,t} \\
 & + \gamma_8 \text{Total Cash}_{i,t} + \gamma_9 \text{Total Cash}_{i,t} * \text{Attribute}_{i,t} + \gamma_{10} \text{Domestic Size}_{i,t} \\
 & + \gamma_{11} \text{Foreign Size}_{i,t} + \gamma_{12} \text{Mature}_{i,t} \\
 & + \gamma_{13} Qdum_{i,t} + \gamma_{14} Leverage_{i,t} + \sum \gamma_k \text{Year}_k + \sum \gamma_k \text{Industry}_k + \varepsilon_{i,t},
 \end{aligned}$$

*Attribute* represents four different measures of PRE and cash, each estimating the extent to which PRE or foreign cash could create capital market frictions. In an efficient capital market, domestic investment will be positively related to domestic investment opportunities and will rely on domestic and foreign cash flows equally (Shin and Stulz 1998). If *Attribute* identifies firms with internal capital market frictions, then investment by the domestic segment in these firms will be less positively related to domestic investment opportunities and will rely more on domestic cash flow than foreign cash flow.

Empirically, this prediction implies that the coefficient on *Domestic Q* will be lower as *Attribute* increases ( $\gamma_5 < 0$ ) because these firms will not be as responsive to domestic investment opportunities. Moreover, the domestic segment in these firms will be more likely to invest using its own cash flow, and less likely to invest using foreign cash flow, implying that the coefficient on *Domestic CF* will be higher as *Attribute* increases ( $\gamma_6 > 0$ ) [or the coefficient on *Foreign CF* will be lower as *Attribute* increases ( $\gamma_7 \leq 0$ ), or both].

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<sup>23</sup> We interact *Total Cash* with *Attribute* to control for the possibility that investment responds differentially to cash levels (in addition to cash flow) across firms with and without the attributes we examine.

The four measures we examine are: (i) *PRE Firm*, which equals 1 for firms with non-zero PRE, and 0 otherwise; (ii) *PRE/Assets*, which equals PRE scaled by total assets; (iii) *Foreign Cash*, which equals the ratio of foreign cash to worldwide assets; and (iv) *PRE Cash*, which equals a firm-level estimate of the amount of PRE held in cash scaled by worldwide assets, using the coefficient estimates reported in Table 4 Panel A.<sup>24</sup> The first two measures generally capture the extent to which the firm has PRE. The third measure, *Foreign Cash*, is the information that the SEC is requesting firms to disclose. The fourth measure essentially combines information both about the extent of PRE that a firm has and the amount of foreign cash that a firm holds to create a measure that is more likely to capture the notion of ‘trapped cash’.

#### *D. Results for Hypothesis 2 – Investment Implications of PRE*

We report results from estimating Equations (6a) and (6b) in Table 5. Panel A shows results for the full sample of 5,680 firm-years from 1998 through 2009. Column (1) reports results for the baseline model. The coefficients on *Domestic Q*, *Domestic CF*, and *Foreign CF* are all significantly positive in the baseline model. These results imply relatively efficient internal capital markets, on average, because domestic investment is responsive to domestic investment opportunities and relies on both domestic and foreign cash flow to finance investment. However, similar to Shin and Stulz (1998), the coefficient on *Domestic CF* is four times the coefficient on *Foreign CF* suggesting some internal capital market frictions are present in the full sample.

Columns (2) and (3) test H<sub>3a</sub>, which predicts that domestic investment by firms with and without PRE respond similarly to investment opportunities and domestic cash flows. In Column (2), using *PRE Firm* to define *Attribute*, the coefficient on *Domestic Q\*Attribute* is not significantly different from zero, while the coefficient on *Domestic CF\*Attribute* is positive and

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<sup>24</sup> For these tests, we compute *Foreign Cash* from 1998 – 2009 using confidential BEA data because the enhanced disclosure requests did not occur until after the end of our sample period.

significant. We find similar results in Column (3) using *PRE/Assets* in place of *PRE Firm*.<sup>25</sup> These results suggest that domestic investment of firms with PRE is not less responsive to domestic investment opportunities, but does rely more heavily on domestic cash flows, relative to other firms. Thus, we find weak evidence that PRE alone signals inefficiencies in U.S. MNCs' internal capital markets.

In Column (4), we investigate whether this pattern emerges for firms with significant foreign cash rather than PRE by defining *Attribute* as *Foreign Cash*. We find that the coefficient on *Domestic Q\*Attribute* is negative and significant, while the coefficient on *Domestic CF\*Attribute* is not significantly different from zero. This result suggests that domestic investment of firms with significant amounts of foreign cash is less responsive to domestic investment opportunities but not more reliant on domestic cash flows, relative to other firms. Again, we find weak evidence that foreign cash alone signals inefficiencies in U.S. MNCs' internal capital markets.

Column (5) tests H<sub>3b</sub>, which predicts that domestic investment by firms with and without PRE held as cash respond similarly to investment opportunities and domestic cash flows. Using *PRE Cash* to define *Attribute*, we find that the coefficient on *Domestic Q\*Attribute* is negative and significant, and the coefficient on *Domestic CF\*Attribute* is positive and significant. In sum, the results in Table 5 are consistent with PRE Cash as the strongest signal of inefficiencies in U.S. MNCs' internal capital markets.

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<sup>25</sup> Harford, Wang, and Zhang (2014) extend the results from several studies including ours using Compustat segment data and foreign cash reported in firms' 10-Ks. They find a similar pattern to the one that we document in Column (3) in a small sample (809 firm-years over a 15-year period) that reports sufficient detail in Compustat Segment data in order to compute domestic and foreign cash flow. However, the authors do not control for domestic investment opportunities or domestic opportunities relative to foreign opportunities, nor do they allow the relationship between investment and investment opportunities to vary with PRE. Therefore, their model is only partially specified. In addition, they use PRE as an estimate of foreign cash in their tests, and the results of our study using actual foreign cash balances do not support their conclusions.

In Panel B, we repeat our tests from Panel A using the sample of 4,339 firm-years with non-zero PRE. Results are roughly similar to those reported in Panel A, with a few exceptions and decreased significance, suggesting that differences in the efficiency of internal capital markets are driven, in part, by differences in firms with and without PRE. Overall, the results in Table 5 suggest that the amount of PRE held in cash is a better measure of internal capital market frictions in U.S. MNCs than PRE alone or foreign cash alone.

#### *E. Analysis of Financial Constraints*

Lastly, we consider the ability of external capital markets to alleviate firms' internal financing frictions in the spirit of Faulkender and Petersen (2012). Firms that are unable to fund domestic investment internally from foreign assets due to tax-induced financing frictions can in theory turn to external capital markets. Thus, if the attributes that we use to test H<sub>3a</sub> and H<sub>3b</sub> identify firms with internal capital market frictions, the empirical patterns we observe in Table 5 should be stronger in a sample of financially constrained firms, relative to a sample of financially unconstrained firms.

We identify firm-years as financially constrained using a score that sums six dummy variables equal to one if the measure suggests the firm is financially constrained and estimate Equation (6b) separately for firms with and without financial constraints.<sup>26</sup> We report these results in Table 6. In all cases, results in Panel A for financially constrained firm-years are consistent with those in Table 5. Results in Panel B for unconstrained firm-years are generally insignificant and in all cases

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<sup>26</sup> We identify six measures of financial constraints from Farre-Mensa and Ljungvist (2016) and Faulkender and Petersen (2012) and define them as dummy variables equal to one if (i) if the firm's KZ Index is in the top quartile (Lamont, Polk, and Saa-Requejo 2001), (ii) the WW index is in the top quartile (Whited and Wu 2006), (iii) the HP Index is in the top quartile (Hadlock and Pierce 2010), (iv) the firm does not have a credit rating, (v) the firm has a history of not paying dividends, and (vi) domestic investment exceeds domestic net income. In Table 6 we report the results defining firms as financially constrained if the score is greater to or equal than the median of 2.

inconsistent with greater internal capital market frictions for firms with high PRE, foreign cash, or PRE held in cash.

## V. Conclusion

U.S. firms continue to expand their operations abroad at a rapid pace – at the end of 2013, 92 percent of S&P 500 firms conducted business outside the U.S. and these foreign operations represent 54 percent of their pre-tax earnings. The growth and size of foreign operations interest policy makers and financial regulators as they seek to understand their role in tax revenue projections and firm liquidity. One particular disclosure about foreign operations is receiving significant interest from both the SEC and tax policy makers – permanently reinvested earnings (PRE). Motivated by the potential importance of PRE in tax policy debates, and our limited understanding of its make-up and investment implications, we conduct a detailed study of the location and composition of PRE and its effect on internal capital market efficiency.

PRE are foreign affiliate earnings for which a firm has not recognized a residual U.S. tax expense, if any, due upon repatriation of those earnings. In practice, firms report the aggregate amount of PRE across all foreign affiliates and seldom report the expected tax liability associated with its repatriation to the U.S. This aggregate number makes it difficult, if not impossible, for investors to understand the implications of PRE for firm value and liquidity, or for policy-makers to understand the implications of PRE regarding the effects of tax reform.

Our study combines firm-level amounts reported as PRE with confidential affiliate-level data from legally mandated federal surveys of U.S. MNCs to learn the location and composition of PRE. We make two key observations. First, we find that 24 percent of PRE represent foreign earnings located in tax havens. Second, we find that a significantly higher proportion of cash held in tax havens is designated as PRE relative to cash held in non-haven jurisdictions. Overall, our

analyses suggest that PRE has multiple implications for firm liquidity and U.S. tax revenue. A small proportion of PRE (14%) is associated with cash held by affiliates in tax havens, while other a larger proportion (20%) is associated with non-cash assets in high growth affiliates. Thus, we urge researchers, investors, and policy makers to exercise caution when using PRE to evaluate firm value and corporate tax reform.

Finally, we investigate whether PRE can tell us something about the efficiency of MNCs' internal capital markets. Relying on the well-developed literature in finance, we find that MNCs with PRE held in cash have domestic investment that is significantly less (more) sensitive to domestic investment opportunities (domestic cash flows). These results imply that there is some friction, such as the repatriation tax liability, that reduces the efficiency of these MNCs' internal capital markets. Furthermore, this friction appears to be concentrated in more financially constrained firms. Overall, our results suggest that the SEC's concern regarding enhanced liquidity disclosures for firms with significant amounts of PRE are warranted and that researchers should use caution when interpreting results using PRE as a proxy for foreign or trapped cash.

## APPENDIX A: ANALYSIS OF SEC COMMENT LETTERS

We search all SEC correspondence files from January of 2009 through June of 2013 for the terms ‘unremitted’, ‘permanently reinvested’, ‘undistributed’, or ‘indefinitely reinvested’ and report the results of this search in Panel A of Table 1A. We find a total of 2,842 correspondences between the SEC and 493 firms (593 unique firm-years). Amongst these, we distinguish between those that include the terms ‘liquidity’ or ‘cash’, which we call ‘Specific’ comment letters (75% of all firms corresponding with the SEC regarding PRE), versus those that do not contain these terms, which we call ‘General’ comment letters (25% of all firms corresponding with the SEC regarding PRE).<sup>27</sup>

We also examine a subsample of firms (excluding banks, insurance companies, REITs, and foreign-owned U.S. entities) with publicly traded equity, that report an absolute value of foreign taxes greater than or equal to \$1 million, and that disclose PRE in their SEC 10K filing. We call this the PRE sample and report summary statistics for this sample in Panel A below the Compustat sample.<sup>28</sup>

In both the Compustat and PRE samples, the SEC’s request for enhanced liquidity disclosures peaked in 2011 and 2012. This result is consistent with Mott and Schmidt (2011) that report foreign cash disclosures were made by a couple dozen companies prior to 2011, but hundreds of MNCs in 2011 and 2012. The general comment letters also appear to have increased in 2011 and 2012, but as a proportion of total comment letters issued they were less significant.

Panel B provides descriptive data for the 181 firms in the PRE sample in Panel A that received a specific comment letter, versus the 639 that meet the criteria for the PRE sample, but did not receive a specific comment letter. Firms that received a comment letter have significantly higher PRE/Assets and PRE than firms that did not, but they do not have significantly higher Cash/Assets.

In terms of investing and financing activities that might require cash, firms that received a letter make fewer capital expenditures and have lower debt service requirements, though they engage in more significant share repurchases. However, none of these differences appear economically significant. Finally, firms that received a letter have a greater market cap, are more profitable, and have higher advertising expenditures, suggesting that the SEC may be partially motivated to pursue (enforce) more widely recognized household brands.

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<sup>27</sup> The issues covered in the general comment letters cover issues such as whether the firm repatriated during the period, how the firm supports its PRE assertion, or asking the firm to provide more detailed data on the effects of the assertion on the effective tax rate (Deloitte 2012).

<sup>28</sup> A significant number of comment letters were issued to banks and insurance companies which are not in our PRE sample. The SEC indicated in Release 33-9144 that these industries were a significant focus for enhanced liquidity disclosure in the MD&A.

TABLE 1A  
ANALYSIS OF SEC COMMENT LETTERS

<b>Panel A: Number of SEC Comment Letters</b>								
<i>Compustat sample:</i>								
Total correspondence between firms and SEC	<u>General</u>	<u>% of Total</u>	<u>Specific</u>	<u>% of Total</u>	<u>Total</u>			
	1442	0.51	1400	0.49	2842			
Unique firm-years	145	0.27	398	0.73	543			
Unique firms	121	0.25	372	0.75	493			
By year:								
2009	21	0.51	20	0.49	41			
2010	11	0.38	18	0.62	29			
2011	40	0.17	193	0.83	233			
2012	42	0.27	114	0.73	156			
2013 (through June)	7	0.21	27	0.79	34			
Total	121	0.25	372	0.75	493			
<i>PRE sample:</i>								
Total correspondence between firms and SEC	<u>General</u>	<u>% of Total</u>	<u>Specific</u>	<u>% of Total</u>	<u>Total</u>			
	1255	0.63	726	0.37	1981			
Unique firm-years	41	0.18	191	0.82	232			
Unique firms	25	0.12	<b>181</b>	0.88	206			
By year:								
2009	2	0.22	7	0.78	9			
2010	2	0.14	12	0.86	14			
2011	11	0.10	95	0.90	106			
2012	8	0.13	56	0.88	64			
2013 (through June)	2	0.15	11	0.85	13			
Total	25	0.12	<b>181</b>	0.88	206			
<b>Panel B: Firm Characteristics of PRE Firms</b>								
Variable	N = 639 (SEC = 0)			N = 181 (SEC = 1)				(0 – 1)
	Mean	Median	Std Dev	Mean	Median	Std Dev		
PRE/Assets	0.11	0.06	0.15	0.18	0.14	0.14	***	(0.06)
Cash/Assets	0.17	0.12	0.15	0.18	0.14	0.15		(0.01)
HighPRE	0.44	0.00	0.50	0.71	1.00	0.46	***	(0.26)
HighCash	0.49	0.00	0.50	0.54	1.00	0.50		(0.05)
HighPRE_HighCash	0.26	0.00	0.44	0.39	0.00	0.49	*	(0.13)
HighPRE_LowCash	0.18	0.00	0.39	0.32	0.00	0.47	***	(0.14)
LowPRE_HighCash	0.23	0.00	0.42	0.15	0.00	0.36	***	0.08
LowPRE_LowCash	0.33	0.00	0.47	0.14	0.00	0.35	***	0.18
Big7Havens	1.16	1.00	1.44	1.83	2.00	1.66	**	(0.68)
DotHavens	0.70	0.00	1.24	1.25	1.00	1.66	***	(0.55)
Countries	11.88	6.00	14.85	19.96	16.00	19.54	***	(8.08)
%ForeignSales	0.34	0.33	0.28	0.42	0.45	0.27		(0.07)
GAAPETR	0.26	0.00	0.44	0.39	0.00	0.49	*	(0.13)
R&D/Sales	0.05	0.01	0.08	0.05	0.02	0.07		(0.01)
Capex/Sales	0.04	0.02	0.03	0.03	0.03	0.03	**	0.00
Dividend	0.01	0.00	0.02	0.01	0.00	0.02		(0.00)
Repurchase	0.01	0.00	0.03	0.02	0.00	0.03	**	(0.01)
Leverage	0.23	0.20	0.20	0.21	0.20	0.16	***	0.01
MTB	2.11	1.73	2.77	2.70	1.97	2.64		(0.59)
Adv/Sales	0.01	0.00	0.02	0.02	0.00	0.03	***	(0.01)
LogMVE	7.10	7.27	2.22	8.22	8.18	1.73	***	(1.11)
PT ROA	0.01	0.04	0.17	0.05	0.06	0.11	***	(0.05)

**Table 1A** provides descriptive data on SEC comment letters issued from January 2009 through June 2013 related to permanently reinvested earnings, and firm characteristics for firms in our PRE sample that received a comment letter, versus those that did not. The variables are constructed using Compustat data as of the end of 2009 unless otherwise noted (variable mnemonics in non-italicized caps are Compustat data items). *SEC* is an indicator variable equal to 1 if a firm in the PRE sample received a specific comment letter (at any point from January 2009 through June 2013), and 0 otherwise. \*, \*\*, \*\*\* indicate statistically significant differences in the means of the variables in the SEC = 1 versus the SEC = 0 subsamples at the 10, 5 and 1 percent level. **Panel B:** *PRE* equals the amount of permanently reinvested earnings reported in a firm's consolidated SEC 10-K filing. *PRE/Assets* is *PRE* divided by total assets (Compustat AT). *Cash/Assets* is cash and cash equivalents divided by total assets [CHE/AT]. *HighPRE* is equal to 1 if *PRE/Assets* is above the sample median and 0 otherwise. *HighCash* is equal to 1 if *Cash/Assets* is above the sample median and 0 otherwise. *HighPRE\_HighCash*, *HighPRE\_LowCash*, *LowPRE\_HighCash*, and *LowPRE\_LowCash* combine *HighPRE* and *HighCash*. For instance, *HighPRE\_HighCash* is equal to 1 if *PRE/Assets* and *Cash/Assets* are both above the sample median and 0 otherwise. *Big7Havens*, *DotHavens*, and *Countries* are the number of big7 havens or dot havens (per Hines and Rice 1994; see footnote 21 for a list of countries), and countries outside the U.S. in which the firm has a material subsidiary [Exhibit 21 data from Scott Dyreng's website]. *%ForeignSales* is foreign sales [Compustat segment data] divided by total sales [Compustat SALE]. *GAAPETR* is total tax expense divided by pre-tax income [TXT/PI], winsorized at 0 and 1. *R&D/Sales* is R&D expenditures divided by sales [XRD/SALE]. *Capex/Sales* is capital expenditures divided by total sales [CAPX/SALE]. *Dividend* is equal to dividends paid in the current year scaled by total assets [DV/AT]. *Repurchase* is equal to share repurchases in the current year scaled by total assets [PRSTKC/AT]. *Leverage* is short- and long-term debt to total assets [(DLTT+DLC)/AT]. *MTB* is the ratio of market value to book value of equity [(PRCC\_F\*CSHO)/CEQ]. *Adv/Sales* is the ratio of advertising expenditures to total sales [XAD/SALE]. *LogMVE* is the natural log of the market value of equity [(PRCC\_F\*CSHO)]. *PT\_ROA* is pre-tax income divided by total assets [PI/AT].

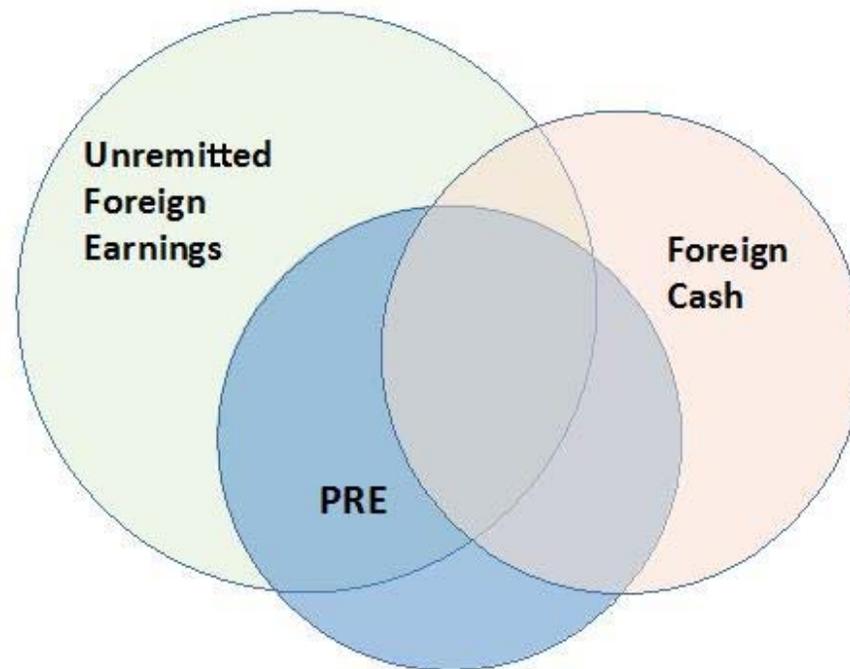
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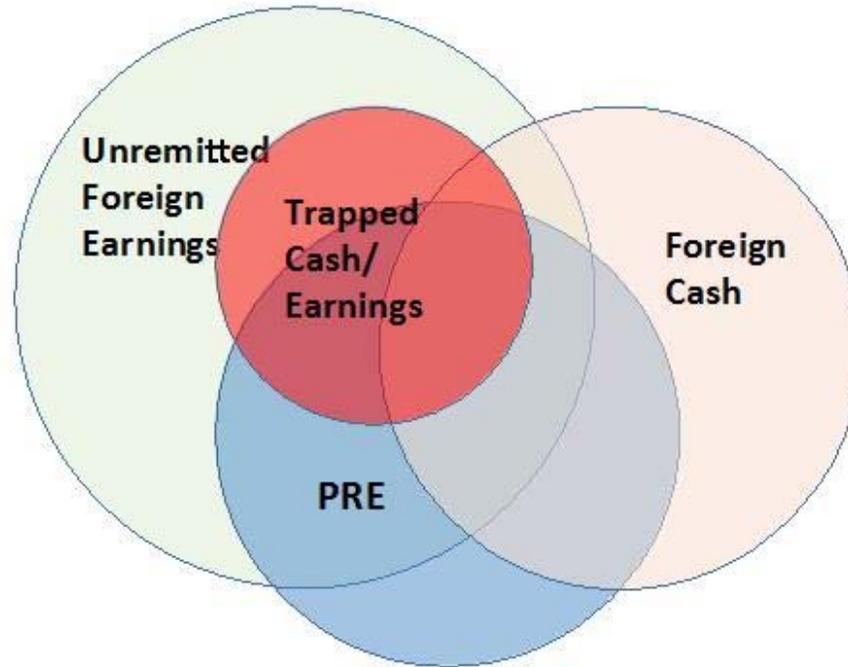
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**FIGURE 1. PANEL A: RELATION BETWEEN UNREMITTED FOREIGN EARNINGS, PRE, AND FOREIGN CASH**



**FIGURE 1. PANEL B: RELATION BETWEEN UNREMITTED FOREIGN EARNINGS, PRE, FOREIGN CASH AND TAX DUE**



**TABLE 1 - SAMPLE AND DESCRIPTIVE DATA**

**PANEL A: SAMPLE SELECTION AND DESCRIPTIVE DATA**

Descriptive data by sample:	Sample							
	(1)		(2)		(3)		(4)	
	Compustat		MNC		PRE		BEA	
	<u>Mean</u>	<u>Median</u>	<u>Mean</u>	<u>Median</u>	<u>Mean</u>	<u>Median</u>	<u>Mean</u>	<u>Median</u>
Total Assets (\$m)	1174	120	3082	765	4488	1434	5963	2462
PRE/Assets	n/a	n/a	n/a	n/a	0.03	0.00	0.04	0.01
Cash/Assets	0.22	0.10	0.18	0.10	0.15	0.08	0.12	0.08
%ForeignSales	0.10	0.00	0.25	0.19	0.27	0.24	0.33	0.30
Countries	2.37	0.00	7.45	2.00	9.02	3.00	12.18	6.00

**PANEL B: DESCRIPTIVE DATA BY YEAR FOR BEA SAMPLE WHERE PRE > 0**

N	Period	Aggregate		Aggregate		Mean PRE/Assets	Mean PRE/ Foreign Cash
		Mean PRE (\$m)	Aggregate PRE (\$b)	Foreign Retained Earnings (\$b)	Foreign Assets (\$b)		
176	1998	371	65	79	316	0.086	0.805
308	1999	637	196	249	1024	0.083	0.752
356	2000	770	274	363	1480	0.084	0.762
383	2001	786	301	387	1435	0.092	0.893
398	2002	889	354	511	1779	0.093	0.932
433	2003	991	429	615	2361	0.101	0.976
330	2004	1149	379	469	2263	0.098	0.788
352	2005	864	304	534	2333	0.082	0.964
424	2006	1225	519	1002	3503	0.087	0.936
402	2007	1636	658	1125	3674	0.100	0.919
386	2008	1997	771	1214	3736	0.125	1.308
391	2009	2066	808	1377	4059	0.129	1.092
4339	Period average	1115	422	660	2330	0.097	0.923

TABLE 1 provides descriptive data for our sample selection and descriptive data for PRE by year. We construct variables using BEA data unless otherwise noted (where all variable mnemonics in non-italicized caps are Compustat data items). In PANEL A, the Compustat sample is all firms in Compustat with non-missing total assets in Compustat (AT). The MNC sample is the subset of the Compustat sample with an absolute value of foreign income tax expense (TXTO) greater than \$1 million. The PRE sample is the subset of the MNC sample that reports permanently reinvested earnings (PRE) in their consolidated SEC 10-K filing at the end of year t. The BEA sample is the subset of the MNC sample that we match to BEA data and that have all data available for our multivariate analysis. *PRE/Assets* is PRE to total assets (Compustat AT). *Cash/Assets* is cash and cash equivalents to total assets (CHE/AT). *%ForeignSales* is foreign sales from Compustat segment data divided by total sales (Compustat SALE). *Countries* is the number of countries outside the U.S. in which the firm has a material subsidiary listed in Exhibit 21 data from Scott Dyreng's website. In PANEL B, we report the subset of Panel A column 4 firm-years that report non-zero PRE. *Aggregate Foreign Retained Earnings* is the sum of retained earnings across a firm's foreign affiliates as reported by the BEA. *Aggregate Foreign Assets* is the sum of assets (excluding investments in other foreign affiliates) across a firm's foreign affiliates as reported by the BEA. *Mean PRE/Foreign Cash* is the mean of the ratio of PRE over a firm's foreign cash and current assets (excluding inventory and receivables) as reported by the BEA.

**TABLE 2 - DESCRIPTIVE DATA FOR MULTIVARIATE TESTS**

	<u>Mean</u>	<u>Std</u>	<u>Mean</u>	<u>Std</u>
	PRE Firm = 0 (N = 1341)		PRE Firm = 1 (N = 4339)	
<b>PANEL A: VARIABLES FOR TESTS OF H1</b>				
PRE/Assets	n/a	n/a	0.098	0.090
Total Foreign Assets	0.218	0.202	0.394	0.237
Haven Foreign Assets	0.018	0.047	0.063	0.103
Growth Foreign Assets	0.061	0.099	0.113	0.134
Cash Foreign Assets	0.082	0.098	0.165	0.133
Haven Cash Foreign Assets	0.009	0.026	0.032	0.059
Growth Cash Foreign Assets	0.023	0.043	0.047	0.063
<b>PANEL B: VARIABLES FOR TESTS OF H2</b>				
Domestic Investment	0.085	.106	0.111	0.145
Domestic Q	0.073	0.058	0.061	0.051
Domestic CF	0.055	0.154	0.088	0.205
Foreign CF	0.066	0.133	0.093	0.117
Total Cash	0.093	0.122	0.113	0.129
Domestic Size	14.350	1.459	14.486	1.443
Foreign Size	12.662	1.551	13.784	1.560
Mature	2.371	0.715	2.659	0.642
Qdum	0.441	0.497	0.360	0.480
Leverage	0.284	0.196	0.240	0.167
Foreign Cash	0.084	0.105	0.166	0.136
PRE Cash	n/a	n/a	0.037	0.032

**TABLE 2** provides descriptive data for our multivariate tests. We construct variables using BEA data unless otherwise noted (where all variable mnemonics in non-italicized caps are Compustat data items). *PRE* equals the amount of permanently reinvested earnings reported in a firm's consolidated SEC 10-K filing. We scale all variables by worldwide assets. *Total Foreign Assets* equals a firm's total assets in its foreign affiliates (excluding investments in other affiliates) at the end of year *t*. *Haven Foreign Assets* equals a firm's *Total Foreign Assets* located in tax havens at the end of year *t*. We define a country as a tax haven if it has a median effective tax rate of less than 10 percent, good legal institutions, and no capital controls in any year from 1998 through 2009. This results in Bahamas, Cyprus, Denmark, Iceland, Ireland, Luxembourg, Malta, Switzerland, Latvia, Hungary, Tunisia, Bahrain, Israel, Kuwait, Oman, Qatar, Saudi Arabia, Brunei, Hong Kong, and Singapore being designated as tax havens. *Growth Foreign Assets* equals a firm's *Total Foreign Assets* in foreign affiliates whose R&D and capital expenditures during year *t* are greater than the median for all affiliates in the sample during year *t*. *Cash Foreign Assets* equals a firm's *Total Foreign Assets* held in the form of cash and other current assets (excluding inventory and receivables). *Haven Cash Foreign Assets* equals a firm's *Cash Foreign Assets* located in a tax haven at the end of year *t*. *Growth Cash Foreign Assets* equals a firm's *Cash Foreign Assets* in foreign affiliates whose R&D and capital expenditures during year *t* are greater than the median for all affiliates in the sample during year *t*. *Domestic Investment* is domestic capital expenditures and R&D scaled by domestic assets. *Domestic Q* is mean domestic sales growth in the firm's primary industry over the prior three years. *Domestic CF* (*Foreign CF*) is domestic (foreign) net income plus depreciation and R&D scaled by domestic (foreign) assets. *Total Cash* is total cash (Compustat CHE). *Domestic Size* (*Foreign Size*) is the log of domestic (foreign) sales. *Mature* is the log of the number of years since the firm made its first foreign direct investment (i.e., the year the firm first began reporting to the BEA). *Qdum* equals 1 when *Domestic Q* is greater than *Foreign Q*, and 0 otherwise. *Leverage* is the ratio of short- and long-term debt to total assets ((DLTT+DLC)/AT). *PRE Firm* equals 1 if the firm reports non-zero *PRE*, and 0 otherwise. *Foreign Cash* is total cash and current assets (excluding inventory and receivables) in foreign affiliates. *PRE Cash* is a firm-level estimate of *PRE* held in cash, using the coefficient estimates reported in Table 4 Panel A.

**TABLE 3 - THE LOCATION OF PRE**

Dependent variable = <i>PRE</i>	Coeff.	Std Error	Variable Mean	Estimate of PRE/Assets	% of PRE
<b>PANEL A: HAVEN/NON-HAVEN AFFILIATES</b>					
Intercept	0.0298***	0.0066			
Total Foreign Assets	0.1498***	0.0139	0.3945	0.0496	76
Haven Foreign Assets	0.1003***	0.0347	0.0632	0.0158	24
R <sup>2</sup> =0.2376					
<b>PANEL B: HIGH GROWTH/LOW GROWTH AFFILIATES</b>					
Intercept	0.0256***	0.0065			
Total Foreign Assets	0.1475***	0.0125	0.3945	0.0416	61
Growth Foreign Assets	0.0858***	0.0347	0.1126	0.0263	39
R <sup>2</sup> =0.2372					
<b>PANEL C: HAVEN AND GROWTH AFFILIATES</b>					
Intercept	0.0282***	0.0066			
Total Foreign Assets	0.1252***	0.0147	0.3945		
Haven Foreign Assets	0.1031***	0.0342	0.0632	0.0144	
Growth Foreign Assets	0.0882***	0.0198	0.1126	0.0240	
R <sup>2</sup> =0.2479					

**TABLE 3** reports the results of estimating Equations (1) and (2) for the 4339 firm-years from 1998 to 2009 with non-zero *PRE*. We construct variables using BEA data unless otherwise noted (where all variable mnemonics in non-italicized caps are Compustat data items). The dependent variable, *PRE*, equals the amount of permanently reinvested earnings reported in a firm's consolidated SEC 10-K filing at the end of year *t*. We scale all variables by worldwide assets. *Total Foreign Assets* equals a firm's total assets of its foreign affiliates (excluding investments in other affiliates) at the end of year *t*. *Haven Foreign Assets* equals a firm's *Total Foreign Assets* located in tax havens at the end of year *t*. We define a country as a tax haven if it has a median effective tax rate of less than 10 percent, good legal institutions, and no capital controls in any year from 1998 through 2009. This results in Bahamas, Cyprus, Denmark, Iceland, Ireland, Luxembourg, Malta, Switzerland, Latvia, Hungary, Tunisia, Bahrain, Israel, Kuwait, Oman, Qatar, Saudi Arabia, Brunei, Hong Kong, and Singapore being designated as tax havens. *Growth Foreign Assets* equals a firm's *Total Foreign Assets* in foreign affiliates whose R&D and capital expenditures during year *t* are greater than the median for all affiliates in the sample during year *t*. In Panel A, Estimate of *PRE/Assets* for *Total Foreign Assets* equals the coefficient times mean *Total Foreign Assets* minus the mean of *Haven Foreign Assets*. Estimate of *PRE/Assets* for *Haven Foreign Assets* equals the mean of *Haven Foreign Assets* times the sum of the coefficient on *Total Foreign Assets* and the coefficient on *Haven Foreign Assets*. % of *PRE* in non-haven affiliates is equal to  $0.0496/(0.0496+0.0158) = 0.76$ . The % of *PRE* in haven affiliates is  $0.0158/(0.0496+0.0158) = 0.24$ .

**TABLE 4 - THE COMPOSITION OF PRE**

Dependent variable = <i>PRE</i>	Coeff.	Std Error	Variable Mean	Estimate of <i>PRE/Assets</i>	% of <i>PRE</i>
<b>PANEL A: CASH/NON-CASH ASSETS</b>					
Intercept	0.0270***	0.0066			
Total Foreign Assets	0.1355***	0.0182	0.3945	0.0311	46
Cash Foreign Assets	0.0837***	0.0312	0.1653	0.0362	54
R <sup>2</sup> =0.2340					
<b>PANEL B: HAVEN/NON-HAVEN AFFILIATES AND CASH/NON-CASH ASSETS</b>					
Intercept	0.0289***	0.0066			
Non-Cash Foreign Assets	0.1299***	0.0216	0.2282	0.0257	39
Cash Foreign Assets	0.1849***	0.0242	0.1653	0.0247	37
Haven Non-Cash Foreign Assets	0.0774	0.0624	0.0304	0.0063	10
Haven Cash Foreign Assets	0.1121*	0.0609	0.0316	0.0094	14
R <sup>2</sup> =0.2402					
<b>PANEL C: HIGH GROWTH/LOW GROWTH AFFILIATES AND CASH/NON-CASH ASSETS</b>					
Intercept	0.0249***	0.0065			
Non-Cash Foreign Assets	0.1091***	0.0191	0.2282	0.0179	26
Cash Foreign Assets	0.1997***	0.0243	0.1653	0.0236	35
Growth Non-Cash Foreign Assets	0.0983***	0.0312	0.0639	0.0133	20
Growth Cash Foreign Assets	0.0842**	0.0439	0.0472	0.0134	20
R <sup>2</sup> =0.2430					

**TABLE 4** reports the results of estimating Equations (3) and (4) for the 4339 firm-years from 1998 to 2009 with non-zero *PRE*. We construct variables using BEA data unless otherwise noted (where all variable mnemonics in non-italicized caps are Compustat data items). The dependent variable, *PRE*, equals the amount of permanently reinvested earnings reported in a firm's consolidated SEC 10-K filing at the end of year *t*. We scale all variables by worldwide assets. *Total Foreign Assets* equals a firm's total assets of its foreign affiliates (excluding investments in other affiliates) at the end of year *t*. *Cash Foreign Assets* equals a firm's *Total Foreign Assets* held in the form of cash and other current assets (excluding inventory and receivables). *Haven Cash Foreign Assets* equals a firm's *Cash Foreign Assets* located in tax havens at the end of year *t*. We define a country as a tax haven if it has a median effective tax rate of less than 10 percent, good legal institutions, and no capital controls in any year from 1998 through 2009. This results in Bahamas, Cyprus, Denmark, Iceland, Ireland, Luxembourg, Malta, Switzerland, Latvia, Hungary, Tunisia, Bahrain, Israel, Kuwait, Oman, Qatar, Saudi Arabia, Brunei, Hong Kong, and Singapore being designated as tax havens. *Growth Cash Foreign Assets* equals a firm's *Cash Foreign Assets* in foreign affiliates whose R&D and capital expenditures during year *t* are greater than the median for all affiliates in the sample during year *t*. In Panel A, the estimate of *PRE/Assets* for *Total Foreign Assets* equals the coefficient times mean *Total Foreign Assets* minus the mean of *Cash Foreign Assets*. Estimate of *PRE/Assets* for *Cash Foreign Assets* equals the mean of *Cash Foreign Assets* times the sum of the coefficient on *Total Foreign Assets* and the coefficient on *Cash Foreign Assets*. % of *PRE* held in cash is equal to  $0.0362/(0.0311+0.0362) = 0.54$ . The % of *PRE* held in non-cash assets is  $0.0311/(0.0311+0.0362) = 0.46$ .

**TABLE 5 - INVESTMENT IMPLICATIONS OF PRE: AN ANALYSIS OF FIRM ATTRIBUTES**

<b>PANEL A: FULL SAMPLE</b>										
Dependent variable =			<b>PRE Firm</b>	<b>PRE/Assets</b>	<b>Foreign Cash</b>	<b>PRE Cash</b>				
<i>Domestic Investment</i>	(1)		(2)	(3)	(4)	(5)				
Domestic Q	0.0991	**	0.0956	0.1173	**	0.1797	***	0.1623	***	
	0.0440		0.0722	0.0519		0.0593		0.0527		
Domestic CF	0.2940	***	0.0682	0.2038	***	0.2537	***	0.2126	***	
	0.0354		0.0552	0.0440		0.0607		0.0494		
Foreign CF	0.0686	**	0.0387	0.0367		0.0774	**	0.0478		
	0.0294		0.0258	0.0229		0.0328		0.0296		
Attribute			-0.0157	*	0.1573	**	0.1648	***	0.2783	*
			0.0087		0.0663		0.0509		0.1690	
Domestic Q * Attribute			0.0016		-0.1698		-0.7588	**	-2.9532	**
			0.0789		0.5726		0.3063		1.3573	
Domestic CF * Attribute			0.2628	***	0.6469	***	0.1157		1.6070	**
			0.0655		0.2376		0.2061		0.7006	
Foreign CF * Attribute			0.0516		0.2408		0.0098		1.1693	
			0.0460		0.3390		0.2048		0.8339	
TotalCash	0.0784	**	0.1271	***	0.0938	***	-0.0395		0.0043	
	0.0303		0.0434		0.0308		0.0417		0.0337	
TotalCash * Attribute			-0.0609		-0.3503		0.6563	**	2.0567	**
			0.0490		0.2857		0.2585		0.8275	
Domestic Size	-0.0144	***	-0.0141	***	-0.0101	***	-0.0049	*	-0.0095	***
	0.0026		0.0025		0.0027		0.0029		0.0026	
Foreign Size	0.0170	***	0.0167	***	0.0123	***	0.0051	**	0.0099	***
	0.0022		0.0023		0.0024		0.0026		0.0023	
Mature	-0.0080	**	-0.0063		-0.0087	**	-0.0088	**	-0.0088	**
	0.0041		0.0040		0.0041		0.0041		0.0041	
Qdum	-0.0021		-0.0021		-0.0032		-0.0020		-0.0017	
	0.0043		0.0042		0.0043		0.0042		0.0042	
Leverage	0.0110		0.0026		0.0116		0.0121		0.0071	
	0.0150		0.0148		0.0149		0.0148		0.0144	
Intercept	0.1141	***	0.1265	***	0.1137	***	0.1274	***	0.1337	***
	0.0345		0.0346		0.0344		0.0333		0.0333	
Year fixed effects	Y		Y		Y		Y		Y	
Industry fixed effects	Y		Y		Y		Y		Y	
N	5680		5680		5680		5680		5680	
R-sq.	0.2609		0.2784		0.2821		0.2975		0.2920	

**TABLE 5 - INVESTMENT IMPLICATIONS OF PRE: AN ANALYSIS OF FIRM ATTRIBUTES (CONT.)**

<b>PANEL B: FIRMS WITH NON-ZERO PRE</b>						
<b>Dependent variable =</b>	<b>PRE/Assets</b>		<b>Foreign Cash</b>		<b>PRE Cash</b>	
<i>Domestic Investment</i>	(1)		(2)		(3)	
Domestic Q	0.1332	**	0.1972	***	0.2237	***
	0.0654		0.0625		0.0673	
Domestic CF	0.2775	***	0.3265	***	0.2935	***
	0.0557		0.0631		0.0618	
Foreign CF	0.0582		0.0845	*	0.0730	
	0.0352		0.0453		0.0482	
Attribute	0.2014	***	0.1948	***	0.5309	***
	0.0716		0.0618		0.1981	
Domestic Q * Attribute	-0.0927		-1.0094	**	-3.7223	***
	0.6288		0.3908		1.5622	
Domestic CF * Attribute	0.3240		-0.0155		0.5624	
	0.2579		0.2487		0.8131	
Foreign CF * Attribute	0.1362		0.0491		0.8791	
	0.3663		0.2594		0.9943	
Panel A controls included	Y		Y		Y	
Year fixed effects	Y		Y		Y	
Industry fixed effects	Y		Y		Y	
N	4339		4339		4339	
R-sq.	0.3154		0.3326		0.3334	

**TABLE 5** reports the coefficients and standard errors from estimating Equations (6a) and (6b). Panel A reports results for the full sample. Panel B reports results for the sample of firms with non-zero PRE. We construct variables using BEA data unless otherwise noted (where all variable mnemonics in non-italicized caps are Compustat data items). The dependent variable, *Domestic Investment*, is domestic capital expenditures and R&D scaled by domestic assets. *Domestic Q* is mean domestic sales growth in the firm's primary industry over the prior three years. *Domestic CF* (*Foreign CF*) is domestic (foreign) net income plus depreciation and R&D scaled by domestic (foreign) assets. *Total Cash* is total cash (Compustat CHE) scaled by worldwide assets. *Domestic Size* (*Foreign Size*) is the log of domestic (foreign) sales. *Mature* is the log of the number of years since the firm made its first foreign direct investment (i.e., the year the firm first began reporting to the BEA). *Qdum* equals 1 when *Domestic Q* is greater than *Foreign Q*, and 0 otherwise. *Leverage* is the ratio of short- and long-term debt to total assets ((DLTT+DLC)/AT). *PRE Firm* equals 1 if the firm reports non-zero *PRE*, and 0 otherwise. *PRE/Assets* is *PRE* scaled by worldwide assets. *Foreign Cash* is foreign cash and other current assets (excluding inventory and receivables) scaled by worldwide assets. *PRE Cash* is a firm-level estimate of *PRE* held in cash, using the coefficient estimates reported in Table 4 Panel A, scaled by worldwide assets.

**TABLE 6 - INVESTMENT IMPLICATIONS OF PRE: AN ANALYSIS OF FINANCIAL CONSTRAINTS****PANEL A: FIRM-YEARS WITH HIGH FINANCIAL CONSTRAINTS**

<b>Dependent variable =</b>	<b>PRE Firm</b>	<b>PRE/Assets</b>	<b>Foreign Cash</b>	<b>PRE Cash</b>
<i>Domestic Investment</i>	(1)	(2)	(3)	(4)
Domestic Q	0.1275	0.1618 ***	0.2158 ***	0.1946 ***
	0.0814	0.0610	0.0751	0.0648
Domestic CF	0.0075	0.1671 ***	0.2578 ***	0.1968 ***
	0.0539	0.0468	0.0703	0.0557
Foreign CF	0.0435	0.0580 **	0.1123 ***	0.0707 *
	0.0293	0.0271	0.0419	0.0380
Attribute	-0.0083	0.2240 ***	0.2158 ***	0.3522
	0.0102	0.0760	0.0655	0.2201
Domestic Q * Attribute	-0.0389	-0.7600	-1.0000 **	-4.2456 **
	0.0900	0.6470	0.4163	1.8227
Domestic CF * Attribute	0.3209 ***	0.8922 ***	0.0398	1.7151 **
	0.0679	0.2703	0.2433	0.8243
Foreign CF * Attribute	0.0758	0.2008	-0.1142	1.0935
	0.0550	0.3741	0.2473	1.0062
Control variables included	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y
N	3,933	3,933	3,933	3,933
R-sq.	0.2604	0.2614	0.2689	0.2619

**PANEL B: FIRM-YEARS WITH LOW FINANCIAL CONSTRAINTS**

<b>Dependent variable =</b>	<b>PRE Firm</b>	<b>PRE/Assets</b>	<b>Foreign Cash</b>	<b>PRE Cash</b>
<i>Domestic Investment</i>	(1)	(2)	(3)	(4)
Domestic Q	-0.0867	-0.0998	0.0514	0.0646
	0.1248	0.0917	0.0864	0.0828
Domestic CF	0.4552 ***	0.4245 ***	0.3487 ***	0.3997 ***
	0.1338	0.0933	0.0839	0.0803
Foreign CF	0.0271	0.0140	0.0011	0.0134
	0.0460	0.0379	0.0361	0.0335
Attribute	-0.0198	0.0006	0.0776	0.3070
	0.0162	0.0824	0.0518	0.2251
Domestic Q * Attribute	0.2743 **	3.5944 ***	0.2178	0.9705
	0.1335	1.0481	0.3859	1.8520
Domestic CF * Attribute	-0.0643	-0.2966	0.1287	-0.1407
	0.1462	0.4216	0.1944	1.0305
Foreign CF * Attribute	-0.0058	0.0162	0.2987	0.8201
	0.0543	0.3840	0.2367	0.9883
Control variables included	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y
N	1,628	1,628	1,628	1,628
R-sq.	0.4344	0.4504	0.4721	0.4708

**TABLE 6** reports the coefficients and standard errors from estimating Equations (6a) and (6b) in subsamples partitioned using proxies for financial constraints. Panel A reports results for the sample of firm-years with high financial constraints. Panel B reports results for the sample of firm-years with low financial constraints. We construct variables using BEA data unless otherwise noted (where all variable mnemonics in non-italicized caps are Compustat data items). The dependent variable, *Domestic Investment*, is domestic capital expenditures and R&D scaled by domestic assets. *Domestic Q* is mean domestic sales growth in the firm's primary industry over the prior three years. *Domestic CF* (*Foreign CF*) is domestic (foreign) net income plus depreciation and R&D scaled by domestic (foreign) assets. *Total Cash* is total cash (Compustat CHE) scaled by worldwide assets. *Domestic Size* (*Foreign Size*) is the log of domestic (foreign) sales. *Mature* is the log of the number of years since the firm made its first foreign direct investment (i.e., the year the firm first began reporting to the BEA). *Qdum* equals 1 when *Domestic Q* is greater than *Foreign Q*, and 0 otherwise. *Leverage* is the ratio of short- and long-term debt to total assets ((DLTT+DLC)/AT). *PRE Firm* equals 1 if the firm reports non-zero *PRE*, and 0 otherwise. *PRE/Assets* is *PRE* scaled by worldwide assets. *Foreign Cash* is foreign cash scaled by worldwide assets. *PRE Cash* is a firm-level estimate of *PRE* held in cash, using the coefficient estimates reported in Table 4 Panel A, scaled by worldwide assets. We identify firm-years with high versus low financial constraints using a factor score that contains six proxies for financial constraints from Farre-Mensa and Ljungvist (2016) and Faulkender and Petersen (2012). The six proxies are: (i) *KZIndex* is constructed following Lamont, Polk, and Saa-Requejo (2001) as  $-1.001909[(IB + DP)/\text{lagged PPENT}] + 0.2826389[(AT + PRCC\_F \times CSHO - CEQ - TXDB)/AT] + 3.139193[(DLTT + DLC)/(DLTT + DLC + SEQ)] - 39.3678[(DVC + DVP)/\text{lagged PPENT}] - 1.314759[CHE/\text{lagged PPENT}]$ ; (ii) *WW Index* is constructed following Whited and Wu (2006) and Hennessy and Whited (2007) as  $-0.091 [(IB + DP)/AT] - 0.062[\text{indicator set to one if } DVC + DVP \text{ is positive, and zero otherwise}] + 0.021[DLTT/AT] - 0.044[\log(AT)] + 0.102[\text{average industry sales growth, estimated separately for each three-digit SIC industry and each year, with sales growth defined as above}] - 0.035[\text{sales growth}]$ ; (iii) *HP Index* is constructed following Hadlock and Pierce (2010) as  $-0.737\text{Size} + 0.043\text{Size}^2 - 0.040\text{Age}$ , where *Size* equals the log of Compustat AT, and *Age* is the number of years the firm is listed with a non-missing stock price on Compustat; (iv) *Non-rated* is constructed as an indicator variable set equal to 1 for firms that do not have a credit rating, using data obtained from Compustat SPLTCRM; (v) *Non-dividend* is constructed as an indicator variable set equal to 1 for firms with a history of zero dividends on common stock (Compustat DVC), going as far back as 1970; and (vi) *FPDum* is constructed (using BEA data) as an indicator variable set equal to 1 if domestic investment exceeds domestic net income. Our factor score sums up the six measures (after turning each of the 3 indices into indicator variables set equal to 1 if the firm is in the top quartile) and splits the sample into two groups using the sample median of 2. Thus, firms in the low financial constraint sample are identified as financially constrained using at most 1 of the 6 measures.