

# The location, composition, and investment implications of permanently reinvested earnings

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March 2014

**Abstract:** This study uses permanently reinvested earnings (PRE) reported in U.S. multinational corporations (MNCs) financial statements, combined with detailed information on foreign affiliate assets to estimate the location, composition, and investment implications of PRE. We use these estimates to study the motivations for PRE designations and the implications of PRE for growth and liquidity. Our analyses suggest that PRE designations are driven by tax and growth incentives – 25 percent of PRE is located in affiliates residing in tax havens, and 38 percent of PRE is in high-growth affiliates. Furthermore, we find that a significant amount of PRE – 55 percent – is invested in non-financial assets. Given that a substantial portion of PRE is in non-financial assets, we investigate whether the SEC’s concerns regarding PRE and liquidity affect MNCs’ domestic investment activity. We find that MNCs with PRE invested in cash have domestic investment that is less responsive to domestic investment opportunities and more sensitive to domestic cash implying that PRE firms have less efficient internal capital markets.

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The statistical analysis of firm-level data on U.S. multinational companies was conducted at the Bureau of Economic Analysis, Department of Commerce under arrangements that maintain legal confidentiality requirements. The views expressed in this study are those of the authors and do not reflect official positions of the U.S. Department of Commerce. The authors thank Diane Del Guercio, Mihir Desai, Lisa De Simone, Fritz Foley, Dave Guenther, Jim Hines, Allison Koester, Jon Lewellen, Tim McDonald, Jake Thornock, members of the International Tax Policy Forum and of the Iowa Tax Readings Group, and participants at the National University of Singapore, 2011 UBCOW Conference, 2012 University of North Carolina Tax Symposium, Bureau of Economic Analysis SCE Seminar, 2012 London Business School Accounting Symposium, 2012 American Taxation Association Annual Meeting, Notre Dame, UCLA, and the University of Michigan for helpful comments. For helpful discussions in developing this paper, the authors thank eight partners in the national offices of Deloitte & Touche, Ernst & Young, PricewaterhouseCoopers, and KPMG. For financial support, the authors thank the International Tax Policy Forum, Linda Krull thanks the Lundquist College of Business Finance and Securities Analysis Center, and Jennifer Blouin thanks Wharton’s Global Initiatives Research Fund. Bob Burnham and Dan Megill provided invaluable research assistance.

## 1. Introduction

The foreign operations of U.S. multinational corporations (MNCs) continue to generate interest among regulators and policy makers as these firms expand abroad. Regulators' interest arises from the need to ensure corporations provide accurate information to investors. Policy makers' interest stems from the ongoing debate about changes to the U.S. international tax system. Moreover, the attention focused on these issues escalates as MNCs' foreign activities become an increasingly important component of their operations. As of 2010, 89 percent of S&P 500 firms operate abroad and, on average, report material subsidiaries in 19 countries and 49 percent their of their pre-tax earnings in foreign subsidiaries.<sup>1</sup>

Much of the recent attention directed at MNCs' foreign operations has focused on the amount of permanently reinvested earnings (hereafter PRE) these firms report in their financial statements. PRE are foreign affiliate earnings for which a firm has not recognized an expense in its consolidated financial statements to reflect the residual U.S. tax that would be due upon repatriation of those earnings.<sup>2</sup> 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 is deferred until the earnings are repatriated to the U.S. parent. MNCs must report the amount of PRE and an estimate of the repatriation tax liability in their financial statement footnotes. However, these amounts are reported on an aggregate, firm-level basis and therefore convey little information about MNCs' operations in specific jurisdictions.

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<sup>1</sup> We determine that 89 percent of S&P 500 firms have foreign operations at the end of fiscal 2010 by examining whether these firms report foreign sales, foreign pre-tax earnings, or a material foreign subsidiary. Firms with *profitable* domestic, foreign, and total pre-tax earnings (60 percent of firms) report, on average, 31 percent and 49 percent foreign sales and pre-tax earnings, respectively.

<sup>2</sup> We use the terms 'affiliate' and 'subsidiary' interchangeably throughout the paper. If MNCs defer U.S. cash taxes on foreign affiliate earnings by reinvesting them abroad, they can also defer tax expense recognition for financial reporting if the earnings will remain outside the U.S. indefinitely. We discuss the PRE designation in Section 2.1.

Despite this lack of detail, PRE has attracted the attention of researchers, regulators, and policy makers because it is one of only a few required disclosures about foreign operations and, more importantly, because of its rapid increase in recent years. Zion, Varshney, and Burnap (2011) document aggregate PRE for S&P 500 firms of \$1.3 trillion at the end of 2010 – a 170 percent increase since 2005. Researchers view this build-up as, in part, a consequence of financial reporting rules because designating foreign earnings as PRE defers financial statement expense recognition for U.S. taxes until repatriation (Graham, Hanlon, and Shevlin 2011; Blouin, Krull, and Robinson 2012). However, because firms report aggregate PRE, testing this prediction and its implications for investment opportunities requires assumptions about the location and composition of PRE. For example, Blouin et al. (2012) assume all PRE is held in low-tax countries, and Graham et al. (2011) use PRE as a proxy for foreign cash.<sup>3</sup> It is important to understand the validity of these assumptions because they have implications for evaluating firm value and liquidity.

The Securities and Exchange Commission (SEC)'s interest in PRE also stems from the unrecognized U.S. tax liability associated with PRE. Specifically, the SEC is scrutinizing firms' PRE disclosures to determine its impact on domestic liquidity. In the context of a U.S. MNC's liquidity needs, the SEC is concerned that the disclosures lack details regarding the proportion of MNCs' cash located overseas and the extent of the tax obligation that would be incurred upon repatriation. Mark Shannon, an associate chief accountant in the SEC's division of Corporate Finance, reports that the SEC seeks to ensure "that companies are telling consistent stories about offshore versus domestic liquidity" (Whitehouse 2011).

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<sup>3</sup> Zion et al. (2011) note the high correlation between PRE and worldwide cash balances (56 percent for firms with PRE greater than \$10 billion), concluding that the recent growth in PRE is likely a contributing factor to the growth in cash. This characterizes PRE as a potential proxy for foreign cash. However, Mott and Schmidt (2011) examine the relation between PRE and actual *foreign* cash balances (rather than worldwide cash) and conclude that PRE amounts are "not helpful in providing investors with an indication of foreign cash levels (p. 5)".

Finally, policy makers view this rapid build-up of funds overseas as a consequence of the deferral aspect of the current U.S. tax system and the high corporate tax rate relative to other countries.<sup>4</sup> The increase interests policy makers for two reasons: 1) these funds represent a potential influx of cash into the struggling U.S. economy, and 2) they represent untaxed earnings and therefore a potential source of U.S. tax revenue. For example, Zion et al. (2011) estimate that PRE are associated with a \$360 billion unrecognized tax liability.<sup>5</sup>

In light of the recent attention focused on PRE and foreign operations, the objective of our study is to provide insight about firms' motivations for PRE designations to better understand the financial reporting and tax policy implications of PRE. By combining firms' SEC 10-K disclosures of PRE with detailed confidential data on the location and scale of MNCs' foreign operations, we investigate the location of PRE (i.e. the extent to which PRE are held in tax haven and/or high-growth affiliates), the composition of PRE (i.e. the extent to which PRE are held in financial versus non-financial assets), and the effect of PRE on a firms' ability to take advantage of domestic investment opportunities.<sup>6</sup>

We begin by studying the location of PRE. These tests provide insights about the importance of tax incentives and growth opportunities for PRE assertions by analyzing the association between PRE and assets in affiliates located in tax havens or experiencing high-growth. We use these associations to estimate the ratio of PRE to assets and the proportion of PRE held in affiliates with these characteristics. For instance, we investigate whether assets in tax havens are

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<sup>4</sup> In 2010, the top U.S. federal corporate income tax rate was 35 percent. This is the highest federal tax rate of all OECD countries, and the average for all other OECD countries is 23.5 percent.

<sup>5</sup> The authors estimate that the \$1.3 trillion of PRE will be subject to a 28 percent repatriation tax rate in the U.S. using the median repatriation tax rate disclosed by 60 firms that provided such an estimate.

<sup>6</sup> We obtain the data for this study from the Bureau of Economic Analysis (BEA) *Survey of U.S. Direct Investment Abroad*. Participation in the BEA surveys is mandated by federal law pursuant to the International Investment and Trade in Services Survey Act (P.L. 94-472, 90 Stat. 2059, 22 U.S.C. 3101-3108) and willful failure to participate can result in monetary fines and/or imprisonment. Furthermore, the BEA staff reviews the survey responses. However, as with any data source, errors occur and compliance may be less than 100 percent. See Mataloni (2003) and <http://www.bea.gov/surveys/diasurv.htm> for detailed information on BEA data.

associated with higher levels of PRE than assets in other affiliates. These tests shed light on the extent to which tax and earnings motivations affect PRE designations. In addition, we consider whether assets in affiliates with high-growth are associated with MNCs' PRE levels. These tests provide evidence on whether investment opportunities motivate PRE designations.

Next, we study the composition of PRE by estimating the type of assets in which PRE are held. In particular, we estimate the proportion of PRE held in financial versus productive (i.e., non-financial) assets. This distinction is important for understanding the implications of PRE for tax policy reform: to the extent that PRE is held in productive assets, tax legislation enacted to encourage repatriation of foreign assets or increase tax revenue would be less effective or create liquidity concerns for MNCs.

Last, we examine the investment implications of PRE by estimating the effect of PRE on a firm's ability to take advantage of domestic investment opportunities. Specifically, academic research finds evidence that cash trapped by repatriation taxes is invested sub-optimally (Bryant-Kutcher, Eiler and Guenther 2008; Edwards, Kravet and Wilson 2012; Hanlon, Lester and Verdi 2012). In addition, the SEC has expressed concern that firms with a high proportion of cash held overseas have an impaired ability to undertake domestic investment and fund domestic operations. Therefore, we test the investment implications of PRE by estimating whether the sensitivity of domestic investment to domestic investment opportunities and cash flows vary with the level of PRE.

We note several important findings. First, we find that about one quarter of PRE is held in tax haven affiliates and about 40 percent of PRE is held in high-growth affiliates. This result suggests that both tax and growth considerations are important in PRE designations, and neither effect appears to dominate the other. We also find that 45 percent of PRE is held in financial

assets. Finally, we find that firms with PRE invested in cash exhibit domestic investment patterns that are less sensitive to investment opportunities and more sensitive to cash flows than firms without PRE. These findings imply inefficiencies in internal capital markets of MNCs with PRE. Hence, the SEC's recent requests for enhanced liquidity disclosures from MNCs with significant amounts of PRE may be warranted.

Our detailed examination of the motivations for PRE designations and the location and composition of PRE makes three significant contributions. First, our study informs researchers about the asset composition of PRE and its earnings implications. Existing studies use PRE as proxies for foreign cash and the earnings effects of repatriations by assuming that all PRE is cash or that all PRE is located in low-tax countries (Graham et al. 2011; Blouin et al. 2012). Our study informs researchers about the accuracy of these assumptions by estimating the proportion of PRE held in tax havens and the proportion of PRE held in cash versus productive assets.

Second, our study helps regulators better understand the liquidity and investment implications of PRE. Our results suggest that only about 10 percent of PRE is held in cash in tax havens. However, we also find that firms with more PRE are less able to take advantage of domestic investment opportunities.

Third, we provide useful information about the potential economic and revenue impacts of tax policy changes. Recent legislative proposals include reducing the U.S. corporate tax rate from 35 percent to 25 percent and repealing or limiting deferral of the U.S. tax on foreign earnings. 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 our sluggish economy. This conjecture assumes that, if Congress limits deferral, all or most PRE would generate tax revenue and be repatriated. Consistent with this conjecture, our

estimates suggest that 25 percent of PRE is located in tax havens. However, about 50 percent of PRE is held in productive assets which are less likely to be repatriated if Congress limits deferral or lowers the U.S. corporate tax rate. By documenting the location and asset composition of PRE, we illustrate the need to be cautious when interpreting PRE as a source of tax revenue and/or economic stimulus.<sup>7</sup>

Section 2 provides background and motivation. Section 3 develops hypotheses. Section 4 describes the sample and provides descriptive data. Section 5 outlines the research design and discusses our results. Section 6 concludes.

## **2. Background and motivation**

### *2.1. What are permanently reinvested earnings (PRE)?*

The U.S. taxes MNCs' foreign affiliate earnings when 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>8</sup>

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<sup>7</sup> It is important to note that undistributed earnings that are not PRE also represent a potential source of tax revenue.

<sup>8</sup> [http://www2.financialexecutives.org/news/finrep/letters/Dfdtax\\_Jun14.pdf](http://www2.financialexecutives.org/news/finrep/letters/Dfdtax_Jun14.pdf) (last 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>9</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 earnings.

In addition, 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>9</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>10</sup> 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.

Firms' disclosures about PRE have begun to attract the attention of both tax policy makers and financial regulators due to their size and rapid increase in recent years. Zion, Varshney, and Burnap (2011) document aggregate PRE for S&P 500 firms of \$1.3 trillion at the end of 2010 – a 170 percent increase since 2005. Moreover, Zion et al. (2011) estimate that PRE are associated with a \$360 billion unrecognized tax liability.<sup>11</sup> Given the magnitude of both the reinvested earnings and the associated unrecognized tax liability, the motivations that underlie PRE designations are important to understand as various parties scrutinize and interpret PRE in different contexts.

## 2.2. *Interest in PRE by Tax Policy Makers and Academics*

Tax policy makers are scrutinizing firms' PRE designations because they represent a source of tax revenue that corporations have become adept at avoiding. The concern is that current tax laws allow firms to defer most or 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 sales in another entity over a four year period.

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<sup>10</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.

<sup>11</sup> The authors estimate that the \$1.3 trillion of PRE will be subject to a 28 percent repatriation tax rate in the U.S. using the median repatriation tax rate disclosed by 60 firms that provided such an estimate.

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. 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.

Academic studies are also showing a growing interest in PRE designations in the context of their role in repatriation and foreign investment decisions. Graham et al. (2011) and Edwards et al. (2012) use PRE to proxy for foreign cash effectively trapped abroad to investigate the importance of tax expense deferral in explaining foreign cash balances and value-destroying acquisitions, respectively. Blouin et al. (2012) uses PRE to test whether earnings effects of repatriation are an important factor in MNCs’ repatriation behavior. The authors assume that all PRE are located in low-tax jurisdictions and that financial reporting outcomes are the primary factor firms consider when designating foreign earnings as PRE. The implicit assumption in these studies is that PRE are primarily held in the form of liquid assets and represent untaxed earnings located in low-tax jurisdictions.<sup>12</sup> These assumptions have important implications for how much firms would repatriate and how much tax the U.S. would collect if Congress limits MNCs’ ability to defer the U.S. tax or lowers the corporate tax rate.

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 –

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<sup>12</sup> Each of these studies explicitly recognizes the potential limitation of their assumptions about PRE in their research designs and interpretation of their results.

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. financial versus non-financial 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. Similarly, the potential repatriation of PRE to the U.S. is also greater if PRE is held in financial assets than if it is held in non-financial assets. Our study strives to better understand the motivations underlying firms' PRE assertions to help researchers and policy makers better interpret this accounting figure.

### 2.3. *Interest in PRE by the Securities and Exchange Commission (SEC)*

Although accounting disclosures under APB 23 regarding the amount of PRE have been required by the FASB since 1993 (under paragraph 44 of FAS 109), 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>13</sup> Moreover, the SEC staff requests many of these firms to 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 and the potential income tax payments that would be required upon repatriation.

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<sup>13</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 its cash or other investments to fund its business operations.

For example, the SEC sent the following requests to Caterpillar, General Motors, and IBM, respectively<sup>14</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).

“We note from your disclosure in Note 23 that you have material assets that you consider permanently reinvested overseas. In this regard, it appears there may be amounts recorded in your financial statements, and included in your discussion of liquidity, for which there are material tax-driven restrictions on the free flow of funds from foreign subsidiaries. If so, please add a discussion of such assets. This discussion should include the potential charges that may be incurred if such amounts were repatriated” (Correspondence between SEC and General Motors, April 19, 2011, File No. 001-34960).

“While we note that you intend to permanently reinvest such funds outside of the U.S. and that these funds are not considered a main source of liquidity for funding U.S. operations, we believe you should consider providing enhanced liquidity to disclose the amount of cash held by foreign subsidiaries that would be subject to the potential tax impact associated with the repatriation of undistributed earnings of foreign subsidiaries. In this respect, this disclosure would illustrate that some cash is not presently available to fund domestic operations such as the payment of dividends, corporate expenditures or acquisitions without paying a significant amount of taxes upon their repatriation. As part of your response, please quantify the amount of cash and cash equivalents held in foreign subsidiaries to which you intend to permanently reinvest earnings” (Correspondence between SEC and IBM, September 7, 2011, File No. 001-02360).

Their responses are 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

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<sup>14</sup> The illustrations we offer were found by searching SEC correspondence reports for the terms ‘unremitted’, ‘permanently reinvested’, ‘undistributed’, or ‘indefinitely reinvested’, and ‘liquidity’ or ‘cash’ and do not necessarily imply that these firms are represented in our confidential BEA sample (see Section 4.1).

liquidity. (Correspondence between SEC and Caterpillar Inc., May 10, 2011, File No. 001-0076).

“The Company respectfully advises the Staff that \$4.7 billion of the \$6.9 billion of permanently reinvested amounts is not recorded as liquid assets on the balance sheet as of December 31, 2010” (Correspondence between General Motors Inc. and SEC, April 19, 2011, File No. 001-34960).

“As indicated in the company’s June 28, 2011 response, the company discloses on page 108 of its 2010 Form 10-K that its policy is to indefinitely reinvest the earnings of its foreign subsidiaries, and that it periodically repatriates a portion of these earnings only to the extent that it does not incur an additional U.S. tax liability. It is important to note that the undistributed accumulated foreign earnings of the company’s foreign subsidiaries do not necessarily represent cash and marketable securities. At December 31, 2010, total cash and marketable securities was \$11,651 million, of which \$7,677 million was held in the U.S. and \$3,974 million was held by the company’s foreign subsidiaries. As stated in our prior response, in addition to dividend repatriation, the company has several liquidity options available when the company may have additional cash requirements in the U.S. These options include the ability to borrow funds at reasonable rates, utilizing the company’s committed global credit facility, repatriating high-taxed foreign earnings and recalling intercompany loans that are in place with certain foreign subsidiaries” (Correspondence between SEC and IBM, September 7, 2011, File No. 001-02360).

Consistent with the comment letters above, Jill Davis, associate chief accountant in the SEC’s Division of Corporate Finance, noted at the 2010 AICPA conference the belief that PRE may imply that a significant portion of the consolidated cash balance may not be available to fund domestic operations without paying a significant amount of taxes. To better understand the issues important to the SEC, in the Appendix, we compare MNCs that received comment letters to MNCs that did not receive a comment letter. We find that MNCs that received comment letters have higher levels of PRE, lower effective tax rates and operate in more low-tax (including tax haven) countries than MNCs not receiving a letter. However, the comment letter sample does not have significantly higher consolidated, worldwide cash holdings. Results suggest that the SEC’s concern is that PRE represents earnings in low-tax jurisdictions, and if

associated with non-U.S. cash holdings, then firms' consolidated cash holdings may not properly reflect the firms' liquidity options available to fund the domestic operation.<sup>15</sup>

### **3. Hypothesis development**

As described in Sections 2.2 and 2.3, constituents scrutinizing PRE focus on the implications of PRE for the firm's financial statement earnings, liquidity, and investment decisions. The views discussed above contain a common thread – PRE is generally believed to represent financial assets, earned in low-tax jurisdictions, and capital that is not available for domestic needs without incurring a tax cost. 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.” Caterpillar and many other U.S. MNCs argue with the SEC in their correspondence that domestic funding needs can be met through other means and, moreover, that significant PRE does not preclude the firm from funding its U.S. operation.

These competing views of the SEC and U.S. MNCs regarding the link between PRE and liquidity present two interesting empirical questions. First, what are the underlying motivations for designating PRE and what does it imply about the appropriateness of PRE as a proxy for financial assets trapped abroad in low-tax jurisdictions? Second, does PRE (or the amount of PRE) have any implications for financing the domestic operations of U.S. MNCs? We develop hypotheses below to answer these questions.

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

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<sup>15</sup> 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.

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. Given the fairly crude disclosure of PRE, the multiple ways in which the designation can be justified, and the various motivations for invoking the exception, the location and composition of PRE is difficult to glean from firms' public filings. To understand firms' motivations for designating PRE, we use confidential data at the Bureau of Economic Analysis to estimate the location of PRE, i.e. the affiliates in which PRE are held, and the composition of PRE, i.e. the types of assets in which PRE are held.

First, one possible motivation for designating PRE is to avoid or defer the U.S. tax liability on the earnings. Existing research documents that MNCs use tax planning strategies, such as investment in tax havens (Dyreng and Lindsey, 2009 and Hines and Rice, 1994), to avoid or defer U.S. tax on foreign affiliate earnings. Tax haven countries are a subset of low-tax countries that provide companies with opportunities for tax avoidance. Therefore, investments in tax havens result in low-tax foreign earnings which will generally result in a U.S. tax liability when repatriated, and require an estimate of the repatriation tax expense on the financial statements unless the firm invokes the Indefinite Reversal Exception.

In addition, foreign affiliate earnings invested in tax havens to avoid or defer U.S. tax can meet the technical definition of PRE under the Indefinite Reversal Exception, i.e. the firm can justifiably make a PRE assertion if funds invested in these strategies are typically not repatriated. Thus, we expect that tax planning strategies are an important motivation for

designating foreign earnings as permanently reinvested and investigate the role of tax haven presence in PRE decisions. We test the following hypothesis, stated in null form:

H<sub>1a</sub>: There is no significant difference in the amount of undistributed foreign earnings designated as PRE that parent firms hold in tax haven versus non tax haven affiliates.

Second, PRE may reflect expectations about future growth and foreign expansion. 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 their past experience, forecasted future operations, and repatriation patterns as evidence to support a PRE assertion with respect to foreign earnings.

In addition, existing research finds that U.S. investment abroad is increasing in expected growth (e.g., Desai, Foley and Hines 2007), and that firms will reinvest abroad, 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 their investment likely increases as well, improving the MNCs ability to make a PRE assertion. Thus, we investigate whether growth opportunities are an important motivation for designating foreign affiliate earnings as PRE. We test the following hypothesis stated in null form:

H<sub>1b</sub>: There is no significant difference in the amount of undistributed foreign earnings designated as PRE that parent firms hold in high-growth versus low-growth affiliates.

Third, PRE may be held in the form of financial or non-financial assets. This distinction is important for two reasons. The tax policy implications of PRE depend on the extent to which firms with significant amounts of PRE hold financial assets that can be repatriated without the need to sell non-financial assets used in an active trade or business. In addition, PRE’s asset



composition has implications for firm value. De Waegenaere and Sansing (2008) derive the valuation implications of future repatriation tax consequences and infer that firm value should only impound repatriation tax liabilities when PRE is invested in financial assets. Bryant-Kutcher et al. 2008 find empirical support for the predictions of the De Waegenaere and Sansing (2008) model.

Because of these implications for international tax policy and MNC liquidity we investigate the extent to which firms hold PRE in financial versus non-financial assets. If MNCs hold a significant proportion of PRE in non-financial assets, then these earnings are more likely to remain reinvested in perpetuity. For these firms, transition rules requiring the immediate taxation of reinvested earnings could have adverse consequences to MNCs if they must either sell non-financial assets or borrow to pay any resulting tax obligation. Should policy makers repeal the U.S. tax law that allows for deferral of U.S. taxes on foreign earnings, PRE invested in financial assets is more likely to be repatriated and invested in the U.S. Furthermore, greater levels of PRE in financial assets suggests that there may be a link between PRE and liquidity that warrants the SEC's attention; particularly if there are significant costs that these firms must incur to access their cash. Thus, we test the following hypothesis stated in null form:

$H_{1c}$ : There is no significant difference in the amount of undistributed foreign earnings designated as PRE that parent firms hold in financial versus non-financial assets.

The set of hypotheses above essentially seek to decompose PRE in two ways: (1) by the type of affiliate in which PRE are earned (haven versus non-haven and high-growth versus low-growth), and (2) by the form of assets in which the PRE are invested (cash versus non-cash). By decomposing PRE in this fashion, we can provide evidence regarding which of the various motivations (described above) are most prevalent. In addition, we investigate the appropriateness of PRE as a proxy for foreign cash and/or earnings in haven jurisdictions.

### *3.2. 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 represented financial assets held in tax havens, it is not a foregone conclusion that firms with PRE are precluded from funding their domestic operation.

The SEC's concern appears related to MNCs' internal capital markets. As shown in Table 1 Panel B, firms in the PRE sample hold approximately 17-18 percent of their total assets in cash and cash equivalents. Thus, U.S. MNCs have cash; the issue is whether the foreign cash can (and will) be used to finance domestic operations, and at a reasonable cost. The main question in the internal capital market literature is whether internal capital markets distribute capital efficiently across divisions; i.e., help 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. The question is whether PRE signals the existence of a friction in MNCs that limits the efficient mobility of capital from the foreign segment to the domestic segment. Work studying internal capital markets finds that multiple segments within the firm can facilitate investment because, when the segments operate in different industries, one segment supplements the investment of the other. Said another way, diversification can result in segments having a greater responsiveness to investment opportunities and less reliance on the cash flow generated in that segment.

In a multinational context, the inability of the MNC to move capital from foreign jurisdictions into the U.S., implies that foreign capital would not be available for domestic investment, which in turn would imply that domestic investment would be less responsive to

domestic investment opportunities and more responsive to domestic cash flow (see Lamont 1997; Shin and Stulz 1998; Ozbas and Scharfstein 2010).

Alternatively, if PRE firms do in fact have extensive liquidity options available to finance domestic investment (as indicated by Caterpillar and IBM in Section 2.3), then we would instead observe that domestic investment is more responsive to domestic investment opportunities and less responsive to domestic cash flow for these firms. This discussion leads to the following final hypothesis stated in null form:

H<sub>2a</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 permanently reinvested earnings.

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. As the SEC seems to be particularly interested in MNCs liquidity, we investigate the following hypothesis stated in null form:

H<sub>2b</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 permanently reinvested earnings held in cash.

## **4. Sample selection and data**

### *4.1. 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 operation of each MNC (separate from the foreign operation). Thus, we identify a sample of U.S. domiciled firms with foreign operations from among the universe of Compustat firms, search for PRE disclosures in these firms' SEC 10-K filings, and match those that disclose PRE to a detailed affiliate-level dataset on the domestic and foreign operations of

U.S. MNCs maintained by the Bureau of Economic Analysis (BEA) since 1982 (described in Section 4.2). We obtain our final sample in several steps and provide some descriptive data pertaining to our sample selection process in Table 1 Panel A.

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) and non-missing assets (AT).<sup>16</sup> As the focus of our study is on MNCs, we further restrict the sample to 18,931 firm-years (2,227 firms) reporting an absolute value of foreign income tax expense (TXTO) exceeding \$1 million. Then, among this MNC sample with potentially significant foreign operations, we use a text search program to scan their SEC 10-K filings for disclosures of PRE.<sup>17</sup> This results in a sample of 11,503 firm-years (1,315 firms) disclosing PRE. Finally, we combine this PRE sample with BEA data, resulting in a final sample of 7,416 firm-years (1,126 firms) with the required data – 27 percent report having zero PRE.

Table 1 Panel A provides a comparison of the attributes of firms in the Compustat, MNC, PRE and BEA samples. Overall, Panel A shows that each sample from left of right, represents successively larger firms with more material foreign operations. In addition, firms in the BEA sample with more material foreign operations also have substantially more PRE as a percent of total assets than firms in the PRE sample. This suggests that firms with foreign operations in the MNC sample may not disclose PRE because it is immaterial.<sup>18</sup>

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<sup>16</sup> We end our sample period in 2009 because this is the latest year for which BEA data is available.

<sup>17</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>18</sup> Ayers, Schwab, and Utke (2013) conjecture some firms do not disclose PRE due to non-compliance.

#### 4.2. BEA Data

To obtain information on assets held in specific foreign affiliates of U.S. MNCs, as well as data on the domestic operation of each MNC (separate from the foreign operation), we use confidential affiliate-level 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>19</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>20</sup>

To conduct certain of our analyses, we aggregate foreign assets within various groups of affiliates, as well as 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, fortunately, the BEA requires that the MNC use the equity method of accounting for all equity investments. This means that the assets of a parent company can be cleanly separated from the assets of its affiliates. Observing an intercompany investment account also allows us to avoid double-counting assets in the consolidation process.<sup>21</sup>

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<sup>19</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.

<sup>20</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>21</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

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 abroad, we 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.

#### *4.3.Descriptive Statistics*

Table 1 Panel B provides descriptive data by year for the 5,426 firm-years (823 firms) in the full BEA sample that report non-zero PRE. On average during period, firms in our sample report aggregate PRE in the amount of \$486 billion, which is 64 percent of foreign retained earnings and 18 percent of foreign assets. The only drop in aggregate PRE occurs in 2005, from \$473 billion in 2004 to \$432 billion in 2005. This decrease is likely attributable to the American Jobs Creation Act of 2004 (hereafter AJCA), which temporarily reduced the tax cost of repatriating foreign earnings. Although PRE decreases during the tax holiday, it increases precipitously from 2006 onwards. Finally, the average ratio of PRE to foreign cash in our sample is 3.45 suggesting that PRE is not held entirely in financial assets.

Turning to Panel C, we show descriptive data for our multivariate analyses, separately for firms with and without PRE. The final sample for our tests of  $H_1$  includes only the 5,426 firm-years with non-zero PRE (i.e.,  $PRE_{dum} = 1$ ). The final sample for our tests of  $H_{2a}$  and  $H_{2b}$  includes the full BEA sample of 7,416 firm-years (i.e., firms reporting both positive and zero

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MNCs assets were consolidated under GAAP. Total assets computed using BEA data and total assets in Compustat are highly correlated ( $p = 0.998$ ).

PRE), but which due data requirements to conduct our multivariate tests, results in a sample of 5,674 firm-years. Of these observations, 4,333 have non-zero PRE and 1,341 have zero PRE.

## 5. Research design and results

### 5.1. Research Design for Hypothesis 1 – Location and Composition of PRE

We investigate the location and composition of PRE by estimating the following empirical equation:

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

*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 investment by one affiliate in another affiliate), *Characteristic Foreign Assets* equals a firm’s total assets of its foreign affiliates with the characteristic of interest, *Year* represents year fixed effects, and *i* and *t* represent firm and year subscripts, respectively. All continuous variables are winsorized at the 2nd and 98th percentiles and scaled by worldwide assets. Standard errors are clustered by firm.

Following from  $H_{1a}$  and  $H_{1b}$ , 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 tax rates of less than 10 percent, good legal institutions, and no capital controls in any year from 1998 through 2009.<sup>22</sup> To test  $H_{1a}$ , we define *Haven Foreign Assets* as the sum of each firm’s total assets in the 20 countries that meet these requirements.<sup>23</sup> To test  $H_{1b}$ , we define

<sup>22</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.

<sup>23</sup> These 20 countries include Bahamas, Cyprus, Denmark, Iceland, Ireland, Luxembourg, Malta, Switzerland, Latvia, Hungary, Tunisia, Bahrain, Israel, Kuwait, Oman, Qatar, Saudi Arabia, Brunei, Hong Kong, and Singapore.

*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.

The coefficients in Equation (1) estimate the change in PRE as assets in affiliates with these characteristics increase. 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 PRE as assets in non tax haven affiliates increase by one dollar, and  $\alpha_2$  represents the change in PRE as assets in haven affiliates increase by one dollar, incremental to the change per dollar of assets in non tax haven affiliates. Thus, the total change in PRE per dollar of assets in haven affiliates is represented by  $\alpha_1 + \alpha_2$ .

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 tax 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 PRE in each affiliate, so we estimate the location of PRE in our sample by interpreting these coefficients as the average amount of PRE associated with assets in affiliates with and without the characteristic of interest.

As we are curious whether one characteristic dominates the other in explaining PRE, we further explore MNCs' motivations for PRE designations using the following equation:

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

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Inferences are unchanged when define tax havens as the Big 7 tax havens from Hines and Rice (1994) which include Hong Kong, Ireland, Lebanon, Liberia, Panama, Singapore, and Switzerland.



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

Following from  $H_{1c}$ , we next examine the asset composition of PRE. In particular, we are interested in distinguishing among PRE held in cash (i.e., financial) versus non-cash (i.e., non-financial) assets. To do so, we estimate the following equation:

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

*Cash Foreign Assets* equals the subset of *Total Foreign Assets* (defined above) held in the form of cash and short-term investments. 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 held in cash versus non-cash assets. A significant coefficient on  $\beta_2$  would lead us to reject the null hypothesis that there is no significant difference in proportion of financial versus non-financial assets designated as PRE.

Finally, we combine the above analyses to examine whether the asset composition of PRE varies with the characteristics of a firm's foreign affiliates. Investigating whether MNCs hold more cash in haven affiliates or growth affiliates aids in our understanding of the extent to which PRE represents earnings trapped overseas. Specifically, if MNCs designate earnings as PRE to recognize lower effective tax rates from their tax planning strategies, and hold those earnings primarily in the form of cash, then we would observe a large proportion of PRE held in cash in haven affiliates. If MNCs designate earnings as PRE because they actively invest abroad in expanding their foreign trade or business, we would observe a large proportion of PRE held in non-cash assets in high-growth affiliates.

To investigate the asset composition of PRE jointly with affiliate characteristics, we estimate the following equation:

$$\begin{aligned}
PRE_{i,t} = & \beta_0 + \beta_1 Non-Cash Foreign Assets_{i,t} + \beta_2 Cash Foreign Assets_{i,t} \\
& + \beta_3 Characteristic Non-Cash Foreign Assets_{i,t} \\
& + \beta_4 Characteristic Cash Foreign Assets_{i,t} + \sum \beta_k Year_k + \varepsilon_{i,t}
\end{aligned} \tag{4}$$

*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.<sup>24</sup>

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 PRE as cash in non-tax haven affiliates increases by one dollar, and  $\beta_4$  represents the change in PRE per dollar of cash in haven affiliates, incremental to the change per dollar of cash in non-haven affiliates. The total change in PRE per dollar of cash in haven affiliates is represented by  $\beta_2 + \beta_4$ . This equation allows us to test whether cash (non-cash assets) in haven affiliates has a significantly different effect on PRE than cash (non-cash assets) in non-tax haven affiliates, and to observe the relative magnitudes of PRE held in financial versus non-financial assets.

### 5.1.1. Results for Hypothesis 1 – Location and Composition of PRE

Table 2 reports the results of estimating the effect of affiliate characteristics on the proportion of foreign assets designated as permanently reinvested. Panel A reports the results of estimating Equation (1) using *Haven Foreign Assets* as *Characteristic Foreign Assets*. This test estimates the effect of assets in haven affiliates on PRE relative to assets in non-haven affiliates. A positive coefficient on *Haven Foreign Assets* is consistent with firms designating a higher proportion of assets as PRE in affiliates associated with long-term tax deferral strategies. The coefficient on *Total Foreign Assets* is 0.1463 which suggests that, on average, 14.63 percent of assets in non-

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<sup>24</sup> We disaggregate *Total Foreign Assets* into *Non-Cash Foreign Assets* and *Foreign Cash* in Equation (4) to facilitate the interpretation of the coefficients.

haven affiliates are designated as PRE. The coefficient on *Haven Foreign Assets* suggests that 25.02 percent ( $0.1463 + 0.1039$ ) of assets in haven affiliates are designated as PRE. We reject  $H_{1a}$  because this proportion is significantly higher in haven affiliates relative to non-haven affiliates ( $t = 3.10$ ).

Further, mean foreign assets in haven affiliates as a percentage of worldwide assets is 0.0655 and mean foreign assets as a percentage of worldwide assets is 0.3950. When we use these respective means to estimate the amount of PRE in haven affiliates versus non-haven affiliates, we find that PRE in haven affiliates is 1.64 percent of worldwide assets [ $0.0655*(0.1463+0.1039)$ ] and PRE in non-haven affiliates is 4.82 percent of worldwide assets [ $(0.3950-0.0655)*0.1463$ ]. These estimates suggest that 25 percent of PRE is located in haven affiliates [ $1.64/(4.82+1.64)$ ] and 75 percent of PRE is located in non-haven affiliates [ $4.82/(4.82+1.64)$ ].<sup>25</sup>

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 actively investing abroad as PRE. The coefficient on *Total Foreign Assets* is 0.1452 which suggests that, on average, 14.52 percent of assets in low-growth affiliates are designated as PRE. The coefficient on *Growth Foreign Assets* suggests that 23.61 percent ( $0.1452 + 0.0909$ ) of assets in high-growth

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<sup>25</sup> We also estimate Equation (1) defining *Haven Foreign Assets* as the sum of assets in all tax havens including Andorra, Anguilla, Antigua and Barbuda, Bahamas, Bahrain, Barbados, Belize, Bermuda, British Virgin Islands, Caymans Islands, Channel Islands (Jersey, Guernsey, Alderney), Cyprus, Dominica, Gibraltar, Grenada, Isle of Man, Liechtenstein, Luxembourg, Macao, Maldives, Malta, Marshall Islands, Monaco, Netherlands Antilles, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and Grenadines, and Vanuatu. We find that the coefficient on *Haven Foreign Assets* is 0.1003 ( $t = 2.91$ ) and 31 percent of PRE is located in tax haven affiliates.

affiliates are designated as PRE. We reject  $H_{1b}$  because this proportion is significantly higher in high-growth affiliates relative to low-growth affiliates ( $t = 5.17$ ).

Further, when we use the respective means to estimate the amount of PRE in high-growth affiliates versus low-growth affiliates, we find that PRE in high-growth affiliates is 2.55 percent of worldwide assets [ $0.1078 \times (0.1452 + 0.0909)$ ] and PRE in low-growth affiliates is 4.17 percent of worldwide assets [ $(0.3950 - 0.1078) \times 0.1452$ ]. These estimates suggest that 38 percent of PRE is located in high-growth affiliates [ $2.55 / (4.17 + 2.55)$ ] and 62 percent of PRE is located in low-growth affiliates [ $4.17 / (4.17 + 2.55)$ ].

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 firms designate similar proportions of assets in tax havens and growth affiliates as PRE. However, our finding that relative to non-growth non-haven affiliates, a higher proportion of assets in haven affiliates and high-growth affiliates are designated as PRE confirms that PRE assertions are motivated and supported by the use of tax deferral strategies and actual reinvestment abroad. Since both motivations are clearly present, on average, it is unclear at the firm-level whether a firm's PRE would have implications for its liquidity.

Table 3 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 Panel B reports 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 PRE is held in cash than in non-cash assets. For example, in

Panel A, the coefficient on *Total Foreign Assets* is 0.1407 and the coefficient on *Cash Foreign Assets* is 0.2204 (0.1401+0.0797). This result implies that 14.07 percent of non-cash assets in foreign affiliates are designated as PRE, while 22.04 percent of cash assets are designated as PRE.

Further, as before, 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, 45 percent of PRE is held in cash assets and 55 percent of PRE is held in non-cash assets. We reject  $H_{1c}$  because the proportion of cash assets in foreign affiliates designated as PRE is significantly higher than the proportion of non-cash assets designated as PRE ( $t = 2.65$ ).

Panel B suggests that MNCs designate a higher proportion of cash in haven affiliates as PRE, relative to cash in non-haven affiliates. Interpreting the coefficients consistent with the methodology described above, we find that 30 percent of PRE is held in cash in non-haven affiliates, while 14 percent of PRE is held in cash in haven affiliates. Panel C suggests that MNCs also 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 28 percent of PRE is held in cash in low-growth affiliates, while 18 percent of PRE is held in cash in high-growth affiliates.

Overall, our results confirm that an economically significant proportion of PRE appears to be associated with assets tied up in tax deferral strategies and held in cash. However, it difficult to argue based on these results that PRE are a reasonable proxy for foreign cash or that those foreign cash holdings have implications for firms’ liquidity. For instance, while a significant proportion of cash is held in haven affiliates, a significant proportion of cash is also held in high-growth affiliates. Thus, it is difficult to ascertain for any single firm whether PRE held in cash is

‘trapped’ or held in anticipation of making active investments to expand the firm’s foreign operation in the future.

### 5.2 Research Design for Hypothesis 2 – Investment Implications of PRE

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

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

Where, for each business segment,  $I$  is investment,  $K$  is capital stock at the beginning of the period,  $Q$  is Tobin’s  $Q$ , and  $Cash$  is a measure of cash flow. Studies that examine the efficiency of firms’ internal capital markets 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, so 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.

We adopt this framework and characterize each multinational firm in our sample as having two ‘segments’ – domestic and foreign. In the presence of (repatriation) tax frictions (described in Section 2.1), an MNC would operate its domestic segment largely independently of its foreign segment.<sup>26</sup> In turn, this would imply that we should observe two empirical patterns in the data in the presence of such frictions: i) the domestic segment will rely more on its own cash flow than it

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<sup>26</sup> Note that the opposite is not true in the presence of (repatriation) tax frictions in internal capital markets, which prevent foreign capital from being used for domestic investment, but do not prevent domestic capital from being used for foreign investment.

does on the cash flow of the foreign segment to finance investment (Lamont 1997)<sup>27</sup> and (ii) the investment of the domestic segment will be less responsive to investment opportunities (Shin and Stulz 1998).

To examine the efficiency of MNCs internal capital markets, we begin by estimating the following empirical equation for a sample of 5,674 firm-years from 1998 to 2009 that report PRE and have the data required to compute the model's variables:

$$\begin{aligned} \text{DomesticInvestment}_{i,t} = & \gamma_0 + \gamma_1 \text{Domestic}Q_{i,t} + \gamma_2 \text{Domestic}CF_{i,t} + \gamma_3 \text{Foreign}CF_{i,t} \\ & + \gamma_4 \text{TotalCash}_{i,t} + \gamma_5 \text{DomesticSize}_{i,t} + \gamma_6 \text{ForeignSize}_{i,t} + \gamma_7 \text{Mature}_{i,t} \\ & + \gamma_8 Qdum_{i,t} + \gamma_9 \text{Leverage}_{i,t} + \sum \gamma_k \text{Year}_k + \sum \gamma_k \text{Industry}_k + \varepsilon_{i,t}, \end{aligned} \quad (6a)$$

In our context, tax frictions deter MNCs from using cash flow from the foreign segment to finance domestic investment. 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. We include year and industry fixed effects and cluster standard errors by firm.

*DomesticInvestment* is domestic R&D and capital expenditures scaled by domestic assets. *DomesticQ*, our proxy for investment opportunities, is mean U.S. sales growth in each firms' primary industry over the previous three years. Our proxies for domestic and foreign cash flow measure return on assets for the domestic and foreign segments, respectively. *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>28</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 model to control for firm characteristics that could affect domestic investment and be correlated with *Domestic Q*, *Domestic CF*, or *Foreign*

<sup>27</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.

<sup>28</sup> These measures are consistent with those in Shin and Stulz (1998) and Ozbas and Scharfstein (2010).

*CF. TotalCash* is the ratio of worldwide cash to total assets. Firms with a greater overall *level* of cash may invest more. *Domestic Size* is the log of domestic sales. Firms with a larger domestic operation may make smaller investments if their domestic operation is relatively more mature. *Foreign Size* is the log of foreign sales. Firms with a large foreign operation may make larger investments to support the foreign operation (see Desai, Foley and Hines 2009). *Mature* is the log of the number of years since the firm made its first foreign direct investment. Firms that have been abroad longer may invest less because they are more mature firms. *Qdum* equals 1 when *Domestic Q* is greater than *Foreign Q*, and 0 otherwise. Investment may be greater (smaller) when *Domestic Q* is higher (lower) than *Foreign Q*. *Leverage* is long-term debt to total assets. Finally, firms with greater external borrowing may invest less if they are relatively more constrained.

The SEC's concern surrounding the ability of MNCs to finance domestic investment with foreign liquidity when firms have significant amounts of PRE has prompted a wave of request for disclosure of the proportion of cash held abroad (see Section 2.3). 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 search for evidence of H<sub>2</sub> by interacting our coefficients on interest in Equation (6a), (i.e.,  $\gamma_1$ , and  $\gamma_2$ , and  $\gamma_3$ ) by a variable called *Attribute*, as follows:<sup>29</sup>

$$\begin{aligned}
DomesticInvestment_{i,t} = & \gamma_0 + \gamma_1 DomesticQ_{i,t} + \gamma_2 DomesticCF_{i,t} \\
& + \gamma_3 ForeignCF_{i,t} + \gamma_4 Attribute_{i,t} + \gamma_5 DomesticQ_{i,t} * Attribute_{i,t} \\
& + \gamma_6 DomesticCF_{i,t} * Attribute_{i,t} + \gamma_7 ForeignCF_{i,t} * Attribute_{i,t} \\
& + \gamma_8 TotalCash_{i,t} + \gamma_9 TotalCash_{i,t} * Attribute_{i,t} + \gamma_{10} DomesticSize_{i,t} \\
& + \gamma_{11} ForeignSize_{i,t} + \gamma_{12} Mature_{i,t} \\
& + \gamma_{13} Qdum_{i,t} + \gamma_{14} Leverage_{i,t} + \sum \gamma_k Year_k + \sum \gamma_k Industry_k + \varepsilon_{i,t},
\end{aligned} \tag{6b}$$

<sup>29</sup> We interact *TotalCash* with *Attribute* to control for the possibility that investment may respond differentially to cash *levels* (in addition cash *flow*) across firms with and without the attributes we examine.



We define *Attribute* four ways, each representing a firm characteristic potentially associated with tax-driven internal capital market frictions. If these firm attributes (described below) identify firms with such frictions, then the investment of the domestic segment in these firms will behave more like a stand-alone firm. Empirically, this implies that the coefficient on *DomesticQ* will be lower ( $\gamma_5 < 0$ ) because these firms will not be as responsive to domestic investment opportunities. Moreover, the domestic segment in these firms will be more likely to use their own cash flow, and less likely to use foreign cash flow, implying that the coefficient on *DomesticCF* will be higher ( $\gamma_6 > 0$ ), or the coefficient on *ForeignCF* will be lower ( $\gamma_7 < 0$ ), or both.

The four firm attributes we examine are: (i) *PREdum*, 1 for firms with non-zero PRE, and 0 otherwise; (ii) *PRE/Assets*, PRE scaled by total assets; (iii) *PctForCash*, foreign cash to total cash; (iv) *EstPRECash*, a firm-level estimate of the amount of PRE held in cash scaled by total assets. The first two measures appear to be associated with being selected by the SEC for an enhanced liquidity disclosure (see Section 2.3). The third measure is the information that the SEC is requesting that firms disclose.<sup>30</sup> Our final measure is theoretically closer to the amount of ‘trapped cash’ abroad than either PRE or the percent of cash held abroad alone (this information is voluntarily disclosed by a limited number of firms). *EstPRECash* is a firm-level estimate of PRE held in cash using the coefficient estimates reported in Table 3 Panel B, scaled by total assets. Regarding the last two measures, we are curious whether these new disclosures can identify tax frictions in firms’ internal capital markets.

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<sup>30</sup> We compute *PctForCash* from 1998 – 2009 using confidential BEA data because the enhanced disclosure requests did not occur until after the end of our sample period.

### 5.2.1 Results for Hypothesis 2 – Investment Implications of PRE

We report results from estimating Equations (6a) and (6b) in Table 4. Panel A shows results for the full sample of 5,674 firm-years from 1998 through 2009. Results in column (1) imply relatively efficient internal capital markets, on average, in the full sample. The coefficients on *DomesticQ*, *DomesticCF* and *ForeignCF* are all significantly positive in the baseline model. Domestic investment is both responsive to domestic investment opportunities, and relies on both domestic and foreign cash flow to finance investment.

In columns (2) through (5), we show results for our four firm attributes. In columns (2) and (3), both the existence of PRE and the amount of PRE, respectively, are associated with domestic investment that relies significantly more on domestic cash flow ( $\gamma_6 > 0$ ). The coefficient  $\gamma_5$  is negative but not significant. Column (4) indicates that the ratio of foreign cash to total cash is associated with domestic investment that is significantly less responsive to domestic investment opportunities ( $\gamma_5 < 0$ ). However, the coefficient  $\gamma_6$  is positive but not significant. Finally, in column (5), an estimate of the ratio of PRE held in cash is both associated with (i) domestic investment that is significantly less responsive to domestic investment opportunities ( $\gamma_5 < 0$ ), and (ii) domestic investment that relies significantly more on domestic cash flow ( $\gamma_6 > 0$ ). The coefficient  $\gamma_7$  is insignificant across all specifications implying that there is no significant difference between the sensitivity of domestic investment to foreign cash for firms with the PRE attribute as compared to those without it. Overall, greater levels of PRE held in cash exhibits empirical patterns consistent with tax frictions in firms internal capital markets.

In Panel B, we repeat our tests from Panel A of firm attributes in the sample of 4,777 firm-years with non-zero PRE. Results are roughly similar as those reported in Panel A, but with decreased significance, suggesting significant differences in the efficiency of internal capital

markets is driven by firms with and without PRE. In column (1), the coefficient  $\gamma_6$  is positive but insignificant. In column (2), results are similar to those reported in Panel A, except the coefficient on  $\gamma_6$  flips sign (though remains insignificant). Finally, in column (3), results are similar to those reported in Panel A –  $\gamma_6$  remains positive but is insignificant. Overall, in a sample of only firms with PRE, both *PctForCash* and *EstPRECash* provide some incremental information regarding the efficiency of firms' internal capital markets, with *EstPRECash* exhibiting marginally more consistent results. Thus, for firms with high levels of PRE held in cash, the investment of the domestic segment behaves as if that segment is relatively more financially independent of the foreign segment. Thus, enhanced disclosure beyond simply reporting the amount of PRE in firms' financial statements could be informative to investors about the impact of firms' foreign operations on domestic liquidity.

Finally, as Zion, Varshney, and Burnap (2011) document a 170 percent increase in PRE since 2005, the year firms repatriated under the American Jobs Creation Act (AJCA) of 2004, we estimate Equation (6b) separately for the periods before and after the AJCA in Panel C (for PRE firms only, and excluding 2005). The results for the pre-AJCA period appear to exhibit stronger patterns consistent with tax frictions in firms' internal capital markets. *PctForCash* and *EstPRECash* in the pre-AJCA period (top results) are associated with both (i) domestic investment that is significantly less responsive to domestic investment opportunities ( $\gamma_5 < 0$ ), and (ii) domestic investment that relies significantly more on domestic cash flow ( $\gamma_6 > 0$ ). Results in the post-AJCA period (bottom results) are associated only with domestic investment that is significantly less responsive to domestic investment opportunities ( $\gamma_5 < 0$ ). This is consistent with the AJCA relieving some of the tax frictions by introducing a repatriation tax holiday. However, as firms' levels of both PRE and foreign cash continue to increase at a rapid pace post-AJCA,

enhanced disclosures may help investors identify firms that may eventually face liquidity issues associated with their foreign operations.

## **6. Conclusion**

U.S. firms continue to expand their operations abroad at a rapid pace – at the end of 2010, 89 percent of S&P 500 firms conducted business outside the U.S. and these foreign operations represent 49 percent of their pre-tax earnings. The growth and size of foreign operations interest investors and policy makers as they seek to understand their role in firm value, liquidity, and tax revenue projections. 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 meaning and implications for firm value, we conduct a detailed study of the location and composition of PRE.

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 25 percent of PRE represent foreign earnings located in tax havens. Second, we find that a significantly higher proportion of PRE is

held in the form of cash in tax havens, relative to non-haven jurisdictions. Overall, our analysis suggests that PRE has multiple implications for firm value and U.S. tax revenue. Some portion of PRE appears to represent high levels of cash held by affiliates in low-tax jurisdictions, while other portions represent 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 that report PRE have domestic investment that is significantly less (more) sensitive to domestic investment opportunities (cash flow). These results imply that there is some friction, such as the repatriation tax liability, that reduces the efficiency of these MNCs' internal capital markets. Overall, our results suggest that the SEC's concern regarding PRE disclosures and liquidity may be warranted.

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## **Appendix**

### *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. 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>31</sup>

We also examine a subsample of firms (excluding banks, insurance companies, REITs, foreign-owned U.S. entities) with publicly traded equity, that report an absolute value of foreign taxes greater 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>32</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.

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<sup>31</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 (D&T 2012).

<sup>32</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.

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.

*Panel A: SEC Comment Letter Data*

<u>Compustat sample:</u>	<u>General</u>	<u>% of Total</u>	<u>Specific</u>	<u>% of Total</u>	<u>Total</u>
Total correspondence between firms and SEC	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
<u>PRE sample:</u>	<u>General</u>	<u>% of Total</u>	<u>Specific</u>	<u>% of Total</u>	<u>Total</u>
Total correspondence between firms and SEC	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

*Panel B: Firm Characteristics for PRE Sample*

<u>PRE and Cash</u>	N = 639 (SEC = 0)			N = 181 (SEC = 1)			<u>Diff (0 – 1)</u>
	<u>Mean</u>	<u>Median</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Median</u>	<u>Std Dev</u>	
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

Panel B: Firm Characteristics for PRE Sample (cont.)

Firm Characteristics	N = 639 (SEC = 0)			N = 181 (SEC = 1)			Diff (0 – 1)
	Mean	Median	Std Dev	Mean	Median	Std Dev	
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	0.28	0.20	0.24	0.24	0.18 **	0.02
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)

The Appendix 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. *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. **Panel B:** *PRE* equals the amount of permanently reinvested earnings reported in a firm's consolidated SEC 10-K filing. *PRE/Assets* is *PRE* to total assets (*AT*). *Cash/Assets* is cash and cash equivalents (*CHE*) to assets (*AT*). *HighPRE* is equal to 1 if *PRE* to assets (*AT*) is above the sample median and 0 otherwise. *HighCash* is equal to 1 if cash and cash equivalents (*CHE*) to 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* to assets and cash to assets are both above the sample median and 0 otherwise. **Panel C:** *Big7Havens*, *DotHavens*, and *Countries* are the number of big7 havens or dot havens (per Hines and Rice 1994), and countries outside the U.S. in which the firm has a material subsidiary [Exhibit 21 data from Scott Dyreng's website]. We define a tax haven as a country that meets all the following three criteria in any year from 1998 through 2009: (i) the median effective tax rate for U.S. MNCs is less than 10 percent, (ii) the country has a rule of law index that is above the sample median, and (iii) does not have capital controls in place. *%ForeignSales* is foreign sales [Compustat segment data] to total sales [Compustat *SALE*]. *GAAPETR* is tax expense to pre-tax income [*TXT/PI*], set to 1 if above 1 and set to 0 if below 0. *R&D/Sales* is R&D expenditures to sales [*XRD/SALE*]. *Capex/Sales* is capital expenditures to sales [*CAPX/SALE*]. *Dividend* is equal to dividends paid in the current year scaled by assets [*DV/AT*]. *Repurchase* is equal to share repurchases in the current year scaled by assets [*PRSTKC/AT*]. *Leverage* is short- and long-term debt to assets [(*DLTT+DLC*)/*AT*]. *MTB* is the ratio of market value to book value of equity [(*PRCC\_F\*CSHO*)/*CEQ*]. *Adv/Sales* is advertising expenditures to sales [*XAD/SALE*]. *LogMVE* is the natural log of the market value of equity [(*PRCC\_F\*CSHO*)]. *PT\_ROA* is pre-tax income to assets [*PI/AT*].

**TABLE 1**  
*Sample and Descriptive Data*

**Panel A: Sample Selection and Descriptive Data**

Descriptive data by sample:	Sample							
	N = 68523 Compustat		N = 18931 MNC		N = 11503 PRE		N = 7416 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	5729	2258
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	0.07
%ForeignSales	0.10	0.00	0.25	0.19	0.27	0.24	0.30	0.29
Countries	2.37	0.00	7.45	2.00	9.02	3.00	11.09	6.00

**Panel B: Descriptive Data by Year for BEA Sample where PRE > 0**

N	Period	Mean PRE (\$m)	Aggregate PRE (\$b)	Aggregate		PRE/Assets	PRE/Foreign Cash
				Retained Earnings (\$b)	Foreign Assets (\$b)		
353	1998	515	182	224	939	0.092	4.93
394	1999	601	237	300	1307	0.081	3.79
419	2000	701	294	390	1583	0.088	6.29
428	2001	737	316	412	1510	0.097	2.82
461	2002	852	393	581	2140	0.097	4.13
486	2003	973	471	661	2502	0.107	5.19
436	2004	1079	473	639	2708	0.094	2.91
494	2005	874	432	811	3299	0.085	4.74
503	2006	1118	562	1061	3700	0.086	1.53
466	2007	1564	727	1214	3958	0.104	1.19
471	2008	1766	832	1317	4140	0.123	1.93
515	2009	1764	909	1510	4568	0.123	2.27
5,426	Period average	1045	486	760	2696	0.098	3.45

**TABLE 1 (cont.)**  
*Sample and Descriptive Data*

**Panel C: Descriptive Data for Multivariate Analyses**

<u>Variables</u>	<u>Mean</u>	<u>Std</u>	<u>Mean</u>	<u>Std</u>
	PREdum = 0 (N = 1990)		PREdum = 1 (N = 5426)	
PRE	n/a	n/a	0.099	0.092
Total Foreign Assets	0.218	0.209	0.395	0.246
Haven Foreign Assets	0.017	0.049	0.066	0.108
Growth Foreign Assets	0.055	0.099	0.108	0.135
Cash Foreign Assets	0.058	0.078	0.136	0.122
Haven Cash Foreign Assets	0.006	0.018	0.028	0.057
Growth Cash Foreign Assets	0.016	0.035	0.037	0.058
Sample size: 1998-2004	N = 1551		N = 2977	
Sample size: 2006-2009	N = 332		N = 1955	
	<u>Mean</u>	<u>Std</u>	<u>Mean</u>	<u>Std</u>
	PREdum = 0 (N = 1341)		PREdum = 1 (N = 4333)	
Domestic Investment	0.085	0.106	0.111	0.145
Domestic Q	0.073	0.058	0.062	0.051
Domestic CF	0.056	0.153	0.089	0.205
Foreign CF	0.066	0.134	0.093	0.117
TotalCash	0.093	0.122	0.113	0.129
Domestic Size	14.352	1.460	14.486	1.443
Foreign Size	12.862	1.552	13.783	1.560
Mature	2.372	0.715	2.659	0.643
Qdum	0.441	0.497	0.360	0.480
Leverage	0.618	0.220	0.829	0.849
PRE/Assets	n/a	n/a	0.098	0.089
PetForCash	n/a	n/a	0.614	0.826
EstPRECash	n/a	n/a	0.030	0.028
Sample size: 1998-2004	N = 1227		N = 2386	
Sample size: 2006-2009	N = 234		N = 1595	

**Table 1** provides descriptive data for our sample selection and multivariate analysis. We construct our variables using BEA data unless otherwise noted. **Panel A:** The Compustat sample is all firms in Compustat with non-missing total assets (AT). The MNC sample is the subset of the Compustat sample that meets our MNC selection criteria (see Section 4.1). 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 PRE sample that we match to BEA data and meets the data requirements for our multivariate analysis. *PRE/Assets* is *PRE* to total assets (Compustat AT). *Cash/Assets* is cash and cash equivalents (Compustat CHE) to assets (AT). *%ForeignSales* is foreign sales [Compustat segment data] to total sales [Compustat SALE]. *Countries* is the number of countries outside the U.S. in which the firm has a material subsidiary [Exhibit 21 data from Scott Dyreng's website]. **Panel B:** We scale all variables by total assets. *PRE* equals the amount of permanently reinvested earnings reported in a firm's consolidated SEC 10-K filing. *Total Foreign Assets* equals a firm's total assets of its foreign affiliates (excluding any investment 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 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* of its 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 short-term investments. *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* of its foreign affiliates whose R&D and capital expenditures during year  $t$  are greater than the median for all affiliates in the sample during year  $t$ . **Panel C:** *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* is domestic net income plus depreciation and R&D scaled by domestic assets. *Foreign CF* is foreign net income plus depreciation and R&D scaled by foreign assets. *TotalCash* is the ratio of worldwide cash (Compustat CHE) to total assets. *Domestic Size* is the log of domestic sales. *Foreign Size* is the log of 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 long-term debt (Compustat LT) scaled by total assets. *PREdum* equals 1 if the firm reports non-zero *PRE*, and 0 otherwise. *PRE/Assets* is *PRE* scaled by total assets. *PctForCash* is the ratio of foreign cash to total cash. *EstPRECash* is a firm-level estimate of *PRE* held in cash using the coefficient estimates reported in Table 3 Panel B, scaled by total assets.

**TABLE 2**  
*The Location of PRE*

Dependent variable = <i>PRE</i>	Coeff.	t-stat	Variable Mean	Estimate of PRE/Assets	% of PRE
<b>Panel A: Haven/Non-Haven Affiliates</b>					
Intercept	0.0350	6.97			
Total Foreign Assets	0.1463	11.50	0.3950	0.0482	75
Haven Foreign Assets	0.1039	3.10	0.0655	0.0164	25
R <sup>2</sup> =0.2310					
<b>Panel B: High-Growth/Low-Growth Affiliates</b>					
Intercept	0.0293	6.10			
Total Foreign Assets	0.1452	12.33	0.3950	0.0417	62
Growth Foreign Assets	0.0909	5.17	0.1078	0.0255	38
R <sup>2</sup> =0.2310					
<b>Panel C: Haven and Growth Affiliates</b>					
Intercept	0.0322	6.59			
Total Foreign Assets	0.1216	9.10	0.3950		
Haven Foreign Assets	0.1061	3.23	0.0655	0.0149	
Growth Foreign Assets	0.0927	5.27	0.1078	0.0231	
R <sup>2</sup> =0.2423					

**Table 2** reports the results of estimating Equations (1) and (2) for the 5,426 firm-years from 1998 to 2009 with non-zero *PRE*. We construct variables using BEA data unless otherwise noted. 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 total assets. *Total Foreign Assets* equals a firm's total assets of its foreign affiliates (excluding any investment 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* (see Table 2 for the definition of a tax haven). *Growth Foreign Assets* equals a firm's *Total Foreign Assets* of its 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 *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  $0.0482/(0.0482+0.0164) = 0.75$ . The % of *PRE* in haven affiliates is  $0.0164/(0.0482+0.0164) = 0.25$ .

**TABLE 3**  
*The Composition of PRE*

Dependent variable = <i>PRE</i>	Coeff.	t-stat	Variable Mean	Estimate of PRE/Assets	% of PRE
<b>Panel A: Cash/Non-Cash Assets</b>					
Intercept	0.0338	6.81			
Total Foreign Assets	0.1407	9.02	0.3950	0.0365	55
Cash Foreign Assets	0.0797	2.65	0.1359	0.0300	45
R <sup>2</sup> =0.2253					
<b>Panel B: Haven/Non-Haven Affiliates and Cash/Non-Cash Assets</b>					
Intercept	0.0362	7.14			
Non-Cash Foreign Assets	0.1301	7.30	0.2576	0.0287	45
Cash Foreign Assets	0.1784	7.25	0.1359	0.0193	30
Haven Non-Cash Foreign Assets	0.0741	1.37	0.0369	0.0075	12
Haven Cash Foreign Assets	0.1378	2.27	0.0278	0.0088	14
R <sup>2</sup> =0.2308					
<b>Panel C: High-Growth/Low-Growth Affiliates and Cash/Non-Cash Assets</b>					
Intercept	0.0311	6.42			
Non-Cash Foreign Assets	0.1158	7.00	0.2576	0.0219	33
Cash Foreign Assets	0.1934	7.59	0.1359	0.0190	28
Growth Non-Cash Foreign Assets	0.0879	3.22	0.0687	0.0140	21
Growth Cash Foreign Assets	0.1193	2.62	0.0377	0.0118	18
R <sup>2</sup> =0.2334					

**Table 3** reports the results of estimating Equations (3) and (4) for the 5,426 firm-years from 1998 to 2009 with non-zero PRE. We construct variables using BEA data unless otherwise noted. 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 total assets. *Total Foreign Assets* equals a firm's total assets of its foreign affiliates (excluding any investment 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 short-term investments. *Haven Cash Foreign Assets* equals a firm's *Cash Foreign Assets* located in tax havens at the end of year *t* (see Table 2 for the definition of a tax haven). *Growth Cash Foreign Assets* equals a firm's *Cash Foreign Assets* of its 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  $0.0300/(0.0365+0.0300) = 0.45$ . The % of *PRE* held in non-cash assets is  $0.0365/(0.0365+0.0300) = 0.55$ .



**TABLE 4**  
*Investment Implications of PRE*

**Panel A: Full Sample**

Dependent variable = <i>Domestic Investment</i>	(1)	<b>PREfirm</b> (2)	<b>PRE/Assets</b> (3)	<b>PctForCash</b> (4)	<b>EstPRECash</b> (5)
Domestic Q	0.0965 ** 2.19	0.0973 1.35	0.1172 ** 2.27	0.1782 *** 3.26	0.1520 *** 3.04
Domestic CF	0.2938 *** 8.24	0.0665 1.18	0.2023 *** 4.57	0.2457 *** 4.42	0.2235 *** 4.70
Foreign CF	0.0674 ** 2.27	0.0384 1.49	0.0355 1.55	0.0625 ** 2.13	0.0443 1.61
Attribute		-0.0154 * -1.76	0.1579 ** 2.38	0.1702 *** 3.02	0.3542 * 1.87
Domestic Q * Attribute		-0.0039 -0.05	-0.2196 -0.37	-0.9925 *** 3.25	-3.2971 ** -2.23
Domestic CF * Attribute		0.2642 *** 3.98	0.6511 *** 2.74	0.1867 0.81	1.6360 ** 2.01
Foreign CF * Attribute		0.0506 1.10	0.2301 0.68	0.0738 0.32	1.2252 1.34
TotalCash	0.0727 ** 2.45	0.1243 *** 2.82	0.0856 *** 2.68	0.0115 0.28	0.0251 0.75
TotalCash * Attribute		-0.0606 -1.23	-0.3324 -1.15	0.4533 1.38	1.6906 1.60
Domestic Size	-0.0144 *** -5.55	-0.0139 *** -5.46	-0.0101 *** -3.71	-0.0078 *** -2.75	-0.0103 *** -3.93
Foreign Size	0.0170 *** 7.96	0.0165 *** 7.42	0.0122 *** 5.04	0.0077 *** 3.04	0.0105 *** 4.60
Mature	-0.0082 ** -1.97	-0.0064 -1.60	-0.0089 ** -2.17	-0.0086 ** -2.10	-0.0089 ** -2.16
Qdum	-0.0022 -0.52	-0.0021 -0.50	-0.0033 -0.77	-0.0019 -0.44	-0.0021 -0.49
Leverage	0.0010 0.10	-0.0030 -0.28	-0.0016 -0.14	0.0045 0.42	0.0027 0.25
Intercept	0.1187 *** 3.56	0.1293 *** 3.87	0.1201 *** 3.62	0.1423 *** 4.41	0.1429 *** 4.45
Year fixed effects	Y	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y	Y
N	5674	5674	5674	5674	5674
R-sq.	0.2610	0.2784	0.2822	0.2861	0.2857

**TABLE 4 (cont.)**  
*Investment Implications of PRE*

**Panel B: PRE Firms ONLY**

Dependent variable = <i>Domestic Investment</i>	PRE/Assets		PctForCash		EstPRECash	
	(1)		(2)		(3)	
Domestic Q	0.1323 **		0.1992 ***		0.2083 ***	
	2.03		3.20		3.33	
Domestic CF	0.2754 ***		0.3268 ***		0.3047 ***	
	4.94		5.16		5.24	
Foreign CF	0.0562		0.0848 *		0.0659	
	1.60		1.88		1.51	
Attribute	0.1990 ***		0.1979 ***		0.5799 ***	
	2.77		3.24		2.81	
Domestic Q * Attribute	-0.1343		-1.0443 ***		-4.1628 ***	
	-0.21		-2.62		-2.52	
Domestic CF * Attribute	0.3306		-0.0141		0.4470	
	1.28		-0.06		0.49	
Foreign CF * Attribute	0.1282		0.0395		0.8448	
	0.35		0.15		0.83	
Panel A controls included	Y		Y		Y	
Year fixed effects	Y		Y		Y	
Industry fixed effects	Y		Y		Y	
N	4333		4333		4333	
R-sq.	0.3152		0.3254		0.3245	

**Table 5** reports the results of estimating Equation (5). Panel A reports results for the full sample. Panel B reports result for only the sample of firms with non-zero PRE. Panel C reports results for the years prior to the American Job Creation Act (AJCA) separately from the years after the AJCA. We construct variables using BEA data unless otherwise noted. 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* is domestic net income plus depreciation and R&D scaled by domestic assets. *Foreign CF* is foreign net income plus depreciation and R&D scaled by foreign assets. *TotalCash* is the ratio of worldwide cash (Compustat CHE) to total assets. *Domestic Size* is the log of domestic sales. *Foreign Size* is the log of 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 long-term debt (Compustat LT) scaled by total assets. *PREdum* equals 1 if the firm reports non-zero PRE, and 0 otherwise. *PRE/Assets* is PRE scaled by total assets. *PctForCash* is the ratio of foreign cash to total cash. *EstPRECash* is a firm-level estimate of PRE held in cash using the coefficient estimates reported in Table 3 Panel B, scaled by total assets.

**TABLE 4 (cont.)**  
*Investment Implications of PRE*

**Panel C: Pre versus Post AJCA**

<b>Dependent variable =</b> <i>Domestic Investment</i>	<b>PRE/Assets</b> (1)	<b>PctForCash</b> (2)	<b>EstPRECash</b> (3)
Domestic Q	0.1515 **	0.2301 ***	0.2450 ***
	2.02	3.21	3.34
Domestic CF	0.2376 ***	0.2331 ***	0.2291 ***
	4.27	3.68	3.43
Foreign CF	0.0809	0.1243 **	0.1028 *
	1.59	2.17	1.82
Attribute	0.2366 **	0.1230 **	0.3829 **
	2.42	2.25	2.04
Domestic Q * Attribute	0.0021	-0.7836 *	-3.5292 **
	0.00	-1.69	-2.07
Domestic CF * Attribute	0.4990	0.4237 *	1.5842 *
	1.44	1.94	1.94
Foreign CF * Attribute	0.0748	-0.0500	0.4675
	0.12	-0.14	0.38
Panel A controls included	Y	Y	Y
Year fixed effects	Y	Y	Y
Industry fixed effects	Y	Y	Y
<b>N (Pre-AJCA: 1998 – 2004)</b>	2386	2386	2386
R-sq.	0.3540	0.3553	0.3557

<b>Dependent variable =</b> <i>Domestic Investment</i>	<b>PRE/Assets</b> (4)	<b>PctForCash</b> (5)	<b>EstPRECash</b> (6)
Domestic Q	0.1756	0.2707	0.2626
	0.78	1.35	1.32
Domestic CF	0.3478 ***	0.4404 ***	0.4271 ***
	3.51	4.63	4.66
Foreign CF	-0.0013	0.0332	0.0201
	-0.03	0.62	0.40
Attribute	0.1520	0.3103 ***	1.9448 ***
	1.47	2.76	2.77
Domestic Q * Attribute	-0.0642	-1.5281 *	-10.0217 *
	-0.06	-1.83	-1.78
Domestic CF * Attribute	0.0285	-0.3497	-1.9385
	0.07	-1.00	-0.88
Foreign CF * Attribute	0.4558	0.2119	1.9449
	1.33	0.71	1.07
Panel A controls included	Y	Y	Y
Year fixed effects	Y	Y	Y
Industry fixed effects	Y	Y	Y
<b>N (Post-AJCA: 2006 – 2009)</b>	1595	1595	1595
R-sq.	0.3138	0.3386	0.3319