

Watch What I Do, Not What I Say: The Unintended Consequences of the Homeland Investment Act

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ABSTRACT

The Homeland Investment Act provided a tax holiday for the repatriation of foreign earnings. Advocates argued the Act would alleviate financial constraints by reducing the cost to U.S. multinationals of accessing internal capital. This paper shows that repatriations did not increase domestic investment, employment or R&D—even for firms that appeared to be financially constrained or lobbied for the holiday. Instead, a \$1 increase in repatriations was associated with a \$0.60-\$0.92 increase in shareholder payouts. Regulations intended to restrict such payouts were undermined by the fungibility of money. Results indicate that U.S. multinationals were not financially constrained and were well-governed.

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The Homeland Investment Act (HIA) provided for a one-time tax holiday on the repatriation of foreign earnings by U.S.-based multinational enterprises (MNEs). It was passed in 2004 as part of the American Jobs Creation Act (AJCA). Members of Congress argued that it would create more than 500,000 jobs over 2 years by raising investment in the United States. In a survey and public statements, firms indicated that they would primarily use the repatriated funds to pay down debt, finance capital spending, and fund R&D, venture capital, and acquisitions.¹ Many economists, however, argued that the tax holiday would have little impact on the domestic investment, R&D or employment of firms that repatriated under the provisions of the Act.² In response to the HIA, repatriations of foreign earnings to parents of U.S. MNEs surged. Figure 1 presents aggregate data from the Bureau of Economic Analysis and shows that repatriations increased from an average of \$62 billion per year from 2000 to 2004 to \$299 billion in 2005 under the tax holiday. After the holiday, repatriations fell back to \$102 billion in 2006.³

[INSERT FIGURE 1 HERE]

Firms' responses to the HIA provide an opportunity to test several hypotheses about financial constraints, corporate governance, and the effectiveness of government regulations in directing corporate spending. The temporary tax holiday was a unique episode in that it

¹ Survey conducted by J.P. Morgan Chase Bank and reported in their research report, "Status Report on Repatriation Legislation-aka the Homeland Investment Act," September 17, 2003.

² For a discussion of this view and a description of analysis by The White House's Council of Economic Advisers, see *The Wall Street Journal*, "Tax Windfall May Not Boost Hiring Despite Claims; Some Companies Plan to Use New Break on Foreign Profits for Debt and Other Needs," October 13, 2004.

³ Data from Bureau of Economic Analysis website, U.S. International Transactions Accounts Data, Table 7a, line 3.

effectively reduced the cost to U.S. multinationals of accessing a source of internal capital. The framers of the Act justified the tax holiday based on the premise that these firms' domestic operations were financially constrained. If this were true, repatriated cash could be invested in U.S. projects that had a positive net present value for the firm based on the temporarily lower cost of internal capital but which were not profitable at the higher cost of external finance.⁴ Financially constrained firms that did not currently have any attractive investment projects could also use the repatriations to pay down debt or to increase cash reserves in order to reduce or eliminate future financing constraints. Studying firms' responses to the HIA shows whether the reduced tax costs of accessing internal funds spurred domestic activity or affected debt levels, shedding light on the role of financial constraints.

If firms were not financially constrained, then well-governed firms would have chosen optimal levels of investment and employment before the tax holiday. They would be likely to return any internal capital accessed under the HIA to shareholders through mechanisms such as share repurchases or dividend payments. If firms were not well-governed, however, any internal cash accessed under the HIA could be squandered. This cash would give managers more freedom to pursue projects that provide a greater private benefit than shareholder benefit—such as raising management compensation, upgrading corporate headquarters, or increasing investment in low-return projects. This possibility is discussed in Jensen (1986), and evidence of such behavior appears in papers such as Morck, Shleifer and Vishny (1990), Lang, Stulz and

⁴ Hubbard (1998) and Stein (2003) review the large literature on financial constraints. Some of the key contributions in this extensive literature include: Fazzari, Hubbard and Petersen (1988), Blanchard, López-de-Silanes and Shleifer (1994), Lamont (1997), and Rauh (2006). Kaplan and Zingales (1997) discuss problems in measuring financial constraints. For evidence on financial constraints and R&D, see Hall (1992) and Himmelberg and Petersen (1994).

Walkling (1991), Blanchard, López-de-Silanes and Shleifer (1994), Bates (2005) and Dittmar and Mahrt-Smith (2007). This paper analyzes the effects of the HIA on payouts to shareholders and tests whether corporate governance affects the extent to which firms returned funds to shareholders.

Another issue addressed in this paper is whether the fungibility of money undermines the effectiveness of government regulations on corporate spending patterns. The U.S. Treasury Department issued explicit guidelines on how earnings returned to the United States under the tax holiday could be spent. The funds were to be used for “permitted investments,” which included hiring U.S. workers, U.S. investment, R&D, and certain acquisitions. Repatriations used for certain other purposes, such as executive compensation, dividends, and stock redemptions, would not qualify for the holiday. The literature on the “flypaper effect” suggests that regulations directing how funds are used may have a significant impact. More specifically, this literature finds that money tends to “stick where it hits”. In other words, targeted grants have large effects on expenditures even though cash is fungible.⁵ How U.S. multinationals responded to the restrictions on repatriations under the HIA provides a test of the effectiveness of these types of regulations.

The empirical analysis in this paper utilizes data from the U.S. Bureau of Economic Analysis (BEA). This is the most extensive data available on U.S. multinational firms and has several advantages over the data used in other work on this topic. The estimation approach

⁵ For examples of papers on the flypaper effect, see Pack and Pack (1993), Knight (2002), Gordon (2004), Baicker and Staiger (2005), and Van de Walle (2007). Although most papers on the flypaper effect focus on inter-government transfers, Hines and Thaler (1995) review this literature and point out similar effects in the corporate sector.

addresses two econometric challenges: endogeneity and omitted variable bias. Firms choose how much to repatriate while simultaneously making other financial decisions, and unobservable factors could affect both repatriations and other choices. To address these issues, repatriations under the HIA are instrumented for using characteristics that are predetermined in relation to the enactment of the HIA and that predict which firms are more likely to receive a large tax benefit from it.

The regression results and additional evidence in this paper are inconsistent with the claim that the domestic operations of MNEs were financially constrained and that the tax holiday spurred U.S. job creation or investment for firms that repatriated. More specifically, higher levels of repatriations were not associated with increased domestic capital expenditures, increased domestic employment compensation, increased R&D expenditures, or reduced debt levels. These results hold not only for the full sample of firms, but also for subsamples of firms that appeared to be financially constrained or that lobbied for the Act. Moreover, firms seem to have taken advantage of the HIA by round tripping, that is by injecting capital from their U.S. parents into their foreign affiliates just as they were repatriating funds to the U.S. from their foreign affiliates at the lower tax rate. If parent firms faced financial constraints, they would not have had the resources to send abroad during the tax holiday.

Rather than being associated with increased expenditures on domestic investment or employment, repatriations were associated with significantly higher levels of payouts to shareholders, mainly taking the form of share repurchases. Estimates imply that a \$1 increase in repatriations was associated with an increase in payouts to shareholders of between \$0.60 and

\$0.92, depending on the specification. Also, higher levels of repatriations were not associated with higher levels of management compensation. These results are consistent with the hypothesis that firms are well-governed on average, in the sense that they paid out the cash accessed under the HIA and did not use it to increase executive compensation or to inefficiently increase the scale or scope of firm activities. Additional results show that increased repatriations are associated with higher payouts to shareholders only for firms with strong corporate governance.

Although the results in this paper show that government regulations regarding how firms used the repatriated funds appear to have been ineffective at directing financial policy, the findings do not imply that firms explicitly violated the provisions of the HIA. Instead, firms appear to have reallocated funds internally to bypass the publicly stated goals of the Act.⁶ More specifically, firms may have used funds repatriated at the lower tax rate to pay for investment, hiring, or R&D that was already planned, thereby releasing cash that had previously been allocated for these purposes to be used for payouts to shareholders. This interpretation is supported by survey evidence in Graham, Hanlon and Shevlin (forthcoming).

The remainder of this paper is organized as follows. Section I reviews other recent work on the impact of the HIA, and Section II describes U.S. international tax policy. Section III describes the data, and Section IV discusses the estimation approach and first stage results.

⁶ However, a Senate panel is currently investigating firm responses. See <http://levin.senate.gov/newsroom/release.cfm?id=307617> and the account in Lori Montgomery “Senate Panel Probing ’04 Corporate Tax Break” *The Washington Post*, February 3, 2009.

Section V reports the main findings on how firms responded to the HIA, and Section VI concludes.

I. Related Research on the Impact of the HIA

Several other recent and ongoing projects independently examine the effects of the HIA. The analysis in this paper adds new insights to this literature by utilizing a rich BEA dataset on multinationals and by employing an instrumental variables estimation technique. This paper makes four contributions relative to past work.

The first contribution of this analysis is that the BEA data include measures of repatriations in years other than the year of the tax holiday, making it possible to pinpoint how the holiday changed repatriations. This is important because funds repatriated under the holiday need to be incremental relative to past repatriations to have an effect. Other papers consider the relationship between levels of repatriations under the HIA and measures of firm activity, but they do not isolate the impact of changes in repatriations under the HIA. Despite this data limitation, several papers find evidence that is consistent with our results on the effects of repatriations on payouts. For example, Baghai (2010), Blouin and Krull (2009), and Clemons and Kinney (2007) find that firms that repatriated or reported definite plans to repatriate during the tax holiday increased share repurchases more than firms that did not repatriate. Faulkender and Petersen (2009) also finds that firms that repatriate under the HIA increase payouts to shareholders, but it claims that this result is a consequence of an upward trend in equity payouts among those firms that repatriate under the HIA. Tests described in Section V address this possibility.

A second contribution of this paper is that the BEA data are unique in that they have extensive coverage of both the domestic and foreign activities of firms. Other papers examine the effect of the HIA on worldwide, consolidated measures of activity or only have limited information on domestic activity. This is problematic as the HIA was intended to increase economic activity only in the United States and any such effect may not be captured in the consolidated measures of activity. As a consequence, it is difficult to interpret the findings of other work, which are somewhat mixed. Clemons and Kinney (2007) and Brennan (2008) find no significant relationship between repatriations and consolidated capital expenditures, but Baghai (2010) finds that firms that repatriated under the HIA decreased their consolidated capital expenditures. Faulkender and Petersen (2009) is the only other paper that attempts to examine the effect of the HIA on domestic investment and employment instead of worldwide measures. It finds that repatriations under the HIA were associated with increased domestic investment, but not employment, for a subset of firms identified as being financially constrained. However, the data used in Faulkender and Petersen (2009) are limited in their coverage.⁷

A third contribution of this paper is that it provides in-depth analysis of the role of financial constraints by using information on intrafirm capital flows, six different measures of financial constraints, and lobbying activities. The BEA data include information on all substantial flows of capital between parents and foreign affiliates, and these data allow for an

⁷ To isolate these domestic effects, Faulkender and Petersen (2009) uses the geographic segment data in Compustat, which has limited coverage. For example, considerably fewer than half of the U.S. multinationals in Compustat (defined as firms that are incorporated in the U.S. and report pretax foreign income) report capital expenditures or employment in the United States in the geographic segment data for 2005. Similarly, less than 40% of the firms that were a part of the Homeland Investment Coalition, the lobbying group formed to promote the passage of the HIA, reported such data in Compustat.

analysis of whether parents sent capital abroad before or during the tax holiday. Firms would not have been able to do this if they were financially constrained. The analysis considers the extent to which U.S. MNEs appear to be financially constrained according to a broad range of measures. It also tests if firms that lobbied for the Act stating concerns about financial constraints were more likely to increase investment in response to its passage.

A final contribution of this paper compared to other work on the HIA relates to the estimation methodology. The empirical strategy addresses potential endogeneity and omitted variable problems. The potential importance of endogeneity is underscored by the fact that Blouin and Krull (2009) regress firm payouts on repatriations, whereas Clemons and Kinney (2007) regress repatriations on payouts and other outcomes. This paper addresses these concerns by using an instrumental variables approach that isolates the variation in repatriations induced by the tax incentives of the HIA in a first stage regression that uses detailed information on multinationals' structures and foreign tax obligations. It then analyzes the effects of changes in repatriations that are a consequence of the HIA on various firm outcomes in a second stage regression. Faulkender and Petersen (2009) also utilizes a two-stage estimation approach, but this approach raises some econometric issues. Residuals from a limited dependant variable first-stage regression are the independent variables of interest in the second stage.⁸

Several other papers analyze effects of the HIA in distinctive ways. Graham, Hanlon, and Shevlin (forthcoming) reports the results of a survey of over 400 tax executives, and it finds that only 6% of firms that repatriated under the HIA claimed that they had to forego investment

⁸ These issues are related to the problem of the “forbidden regression” discussed in Wooldridge (2001), p. 236.

because of earnings being trapped overseas. The paper also reports that one of the most common uses for cash “freed up” by the repatriated cash was repurchasing shares. These findings are consistent with those presented below.

A few papers analyze how the passage of the tax holiday affected stock market valuations. Brennan (2008) and Baghai (2010) find that the valuations of firms that subsequently repatriated under the HIA, especially those with weak corporate governance, fell around October 11, 2004, which is the date the Senate approved the final legislation. They speculate that shareholders may have expected managers to squander repatriated funds. The results are surprising because the tax holiday should generate tax savings for firms, as modeled in De Waegenare and Sansing (2008). These results are also difficult to interpret because little uncertainty about the passage of the tax holiday was resolved by the Senate vote.⁹ Oler, Shevlin and Wilson (2007) argue that it is more appropriate to analyze a longer time horizon prior to the actual passage of the Act and find that firms with foreign earnings in low-tax jurisdictions experienced a significant increase in stock prices and market value prior to the passage of the Act. The tests described below do not explore valuation or stock market effects of the HIA, due to difficulties in identifying exactly when uncertainty about the passage and components of the Act was resolved.

⁹ A version of the legislation that would become the AJCA passed the Senate on May 11, 2004 by a vote of 92-5 and an alternative version passed the House on June 17, 2004 by a vote of 251-178. Both of these included provisions for a repatriation tax holiday. Many investors therefore anticipated a tax holiday.

II. U.S. International Tax Policy

The United States and many other countries tax the foreign income of their residents.¹⁰ In order to avoid the double taxation of foreign income, U.S. law grants tax credits for foreign income taxes paid abroad. U.S. MNEs are also permitted to defer U.S. tax liabilities on certain foreign profits until they are repatriated. Taxes due upon repatriation are generally equal to the difference between foreign income taxes paid and tax payments that would be due if earnings were taxed at the U.S. rate. For example, as shown in the simple example in the top panel of Figure 2, if the U.S. tax rate is 35%, and a U.S. MNE earns \$100 abroad and pays \$20 in host country income taxes, an additional \$15 would be due in U.S. taxes when the earnings are repatriated. If foreign income taxes paid exceed the amount that would be due if earnings were taxed at the U.S. rate, then no additional taxes are owed. For firms that repatriate earnings from multiple foreign locations, U.S. tax obligations are determined by worldwide averaging. This approach allows firms that repatriate earnings from jurisdictions with tax rates above the U.S. rate to reduce the U.S. tax costs of repatriating income from low tax jurisdictions.

[INSERT FIGURE 2 HERE]

¹⁰ The Obama administration has proposed a number of changes to U.S. international tax law, including increasing certain taxes on earnings held abroad by U.S. multinationals.

These rules create incentives and opportunities for firms to reduce their tax obligations and suggest that certain kinds of firms are most likely to benefit from a tax holiday.¹¹ The tax costs of repatriations are higher for firms that operate abroad in low tax jurisdictions, and Desai, Foley, and Hines (2007) show that such firms have lower repatriations. Another common strategy to avoid U.S. repatriation taxes involves the indirect ownership of foreign affiliates, either through holding companies or through affiliates in tax havens that do not impose repatriation taxes. Under these kinds of ownership arrangements, earnings do not need to be returned to the United States before they are invested elsewhere around the world, thereby avoiding U.S. repatriation taxes. Altshuler and Grubert (2003) and Desai, Foley, and Hines (2003) illustrate that holding company structures have these effects, and Desai, Foley, and Hines (2006) show that affiliates in tax havens are instrumental in facilitating the deferral of U.S. taxes, whether or not they are classified as holding companies. These characteristics of U.S. international tax law and the research evidence suggest that firms facing low tax rates abroad and firms that make use of holding company structures or tax haven affiliates should have the most to gain from a tax holiday on repatriations.

The proposal for the HIA started to gain momentum after the 2004 repeal of a tax subsidy for U.S. exporters that was ruled illegal by the World Trade Organization. Firms and lobbyists called for some offsetting tax relief. As the economy showed signs of weakness in the first half of 2004, legislators seriously began to consider a temporary tax holiday for repatriations, ostensibly as a way of ensuring that U.S. multinationals had funds to invest domestically.

¹¹ An extensive literature analyzes the optimal repatriation strategies of multinational firms in this environment – see Sinn (1984), Hartman (1985), Hines (1994) and Weichenrieder (1996).

In October 2004, the AJCA became law. One component of the AJCA, the HIA, was a temporary tax holiday on the repatriation of dividends from foreign subsidiaries, subject to several restrictions. More specifically, the HIA allowed companies to deduct 85% of their repatriations from additional U.S. taxes for the first taxable year beginning on or after the date that the HIA was signed. Taxes were still due on the remaining 15% of repatriations, but firms continued to receive tax credits for foreign income taxes paid on these earnings. For example, as shown in the bottom panel of Figure 2, if a U.S. multinational earned \$100 abroad and paid \$20 in host-country income taxes, under the HIA 85% of the foreign earnings would be exempt from U.S. repatriation taxes. The firm would only need to pay 15% in U.S. taxes on the remaining \$15 in earnings. The firm's repatriation tax burden would therefore be only \$2.25 ($=\$15 \times 15\%$) under the Act as opposed to \$15 ($=\$100 \times 15\%$) without the Act.

U.S. repatriations only qualified for this tax holiday if they met several criteria.¹² Most relevant to the analysis in this paper, repatriations had to be used for certain domestic activities in accordance with a domestic investment plan in order to qualify for the tax holiday. Investments that were permitted uses for the repatriated funds included: hiring and training domestic workers, domestic infrastructure and capital investments, R&D, financial stabilization (including debt repayment) for the purposes of U.S. job retention or creation, and certain acquisitions of business entities with U.S. assets. Expenditures that were explicitly not permitted uses for repatriations under the tax holiday were: executive compensation, intercompany transactions, dividends and other shareholder distributions, stock redemptions, portfolio

¹² For additional details on criteria for repatriations to qualify for the tax holiday and on other aspects of the HIA, see Dharmapala, Foley and Forbes (2009) and the Internet Appendix.

investments, debt instruments, and tax payments. Some economists, such as Clausing (2005), questioned the effectiveness of specifying permitted uses for repatriations. She argues that money is fungible, and firms could simply earmark spending on existing projects that met the required criteria to qualify for the tax deduction and then have the freedom to use the repatriated cash in any way.

Even after the HIA was passed in October 2004, considerable uncertainty existed about important details, such as what funds were eligible and how repatriations under the tax holiday could be spent. Therefore, many firms discussed the possibility of using the repatriation tax holiday in their 2004 annual filings but did not commit to specific actions. This uncertainty was resolved in a series of clarifying documents released by the U.S. Treasury Department in late 2004 and early 2005. As a result, most companies used this tax holiday in 2005 even though they knew about it in 2004. The time between when the Act was passed and when repatriations needed to be completed to qualify for the tax holiday provided parent firms with an opportunity to send cash abroad in the form of new paid-in capital that could replace retained earnings that were subsequently repatriated, a practice referred to as round tripping.¹³

III. Data

Analyzing how firms responded to the repatriation tax holiday requires combining data from several sources. Annual information on repatriations and on U.S. MNE activity from 1996

¹³ Once the money has been injected from the parent to the foreign subsidiary, it is treated like new paid-in capital as opposed to retained earnings. The future earnings generated by this capital base are subject to repatriation taxes, but the return of paid-in capital is, as a general matter, not taxable. Capital gains taxes would apply if the parent firm sold the subsidiary for more than its original value.

to 2005 is drawn from two surveys conducted by the BEA. The first of these is the Survey of Direct Transactions of U.S. Reporter with Foreign Affiliate, which provides information on annual repatriations from 1996 to 2005 by U.S. MNEs. A U.S. MNE is the combination of a single U.S. legal entity that has made a direct investment abroad, called the U.S. parent, and at least one foreign business enterprise, called the foreign affiliate. This survey of transactions captures not only repatriation data but also other direct transactions between the U.S. operations and foreign affiliates of U.S. MNEs. It tracks flows of equity from parent companies to their affiliates, allowing an analysis of whether firms engaged in round tripping.

The second BEA dataset is drawn from the BEA Survey of U.S. Direct Investment Abroad, which captures financial and operating information for both the parent companies and foreign affiliates of U.S. multinationals.¹⁴ These data include information on the industry and location of each affiliate, as well as firm-level information on some outcome variables that are used to analyze responses to the HIA. Firms are required to report information on their capital expenditures and employment compensation in the U.S., as well as on parent liabilities. This dataset also contains information to create one of the instruments used for estimation and discussed in more detail in Section IV: whether MNE affiliates are structured as holding companies or are located in tax havens.

¹⁴ The forms that firms are required to complete vary depending on the year, size of the parent and affiliate, and the parent's ownership stake. The most extensive data are collected in benchmark years – 1999 and 2004. BEA uses reported data to estimate universe totals when surveys cover only larger affiliates or when only certain affiliates provide information on particular survey forms. Only reported data are used in this paper's analysis. Additional information on the BEA data can be found in Mataloni (2003).

Two additional datasets, Compustat and ExecuComp, are the sources of several other outcome variables in the analysis. Research and development (R&D) expenditures (data item 46), net property, plant and equipment (data item 8), dividends (data item 127), and repurchases of stock (data item 115) are each drawn from Compustat. The R&D and net property, plant and equipment variables capture worldwide levels of activity. Missing values for R&D expenditures are assumed to be zero. ExecuComp is the source of data on total CEO compensation, including salary, bonus, and the value of stock and option grants. In most of the specifications presented below, outcomes and repatriations are scaled by beginning-of-period consolidated assets, which are measured using Compustat (data item 6).¹⁵

Compustat data are also used to create the other instrument for repatriations and to compute the control variables. The second instrument measures the tax costs of repatriating foreign earnings and is defined in Section IV. Firm leverage, one of the controls, is measured as the ratio of total debt to the sum of total debt and the market value of equity. Firm investment opportunities are controlled for using a proxy for Tobin's q , defined as the ratio of the book value of assets plus the market value of equity less the book value of equity, the total of which is divided by the book value of assets. The final controls, cash holdings and profitability, are measured as consolidated cash and consolidated net income, respectively, and in most specifications, they are scaled by lagged consolidated assets.

[INSERT TABLE I HERE]

¹⁵ All scaled variables are winsorized at the 0.25% level in each tail. Similar results are obtained if a larger share of observations is winsorized.

Table I reports summary statistics for the complete data set created by the merger of this information from the two BEA surveys, Compustat, and ExecuComp. In the full sample of 924 firms in 2005, 261 firms repatriated foreign earnings. A correlation matrix for the main variables used in the analysis appears in the Internet Appendix.

IV. Estimation and First-Stage Results

The empirical analysis in this paper exploits differences in how the HIA affected the tax costs of repatriation across firms to explore how firms respond when they face lower costs of accessing internal capital. This section discusses the estimation strategy and the first-stage results, and the next section tests for effects on several outcome variables, including domestic capital expenditures, domestic employment compensation, R&D expenditures, parent leverage, firm expansion, CEO compensation, dividends to shareholders, and share repurchases.

A simple OLS specification to estimate the impact of dividend repatriations on each of these outcome variables would take the following form:

$$V_{it} = \beta R_{it} + \mathbf{X}_{it}\boldsymbol{\gamma} + \mu_i + \delta_t + \varepsilon_{it} , \quad (1)$$

where V_{it} measures the outcome variable of interest for firm i in year t , R_{it} is repatriations by firm i in year t , $\mathbf{X}_{it}$ is a vector of controls, μ_i is a firm effect, δ_t is a year effect, and ε_{it} is the error term. In order to control for correlations that might be induced by changes in firm size through time,

the outcome variables, repatriations, and control variables are scaled in most specifications, but some tests generate estimates using variables measured in levels.

This general estimating framework has two potential problems, endogeneity and omitted variable bias, either of which could cause OLS estimates of β to be biased downwards or upwards. For example, an omitted variable such as domestic cash flows could bias estimates of β downward. If domestic earnings were high, this could lead to an increase in domestic investment or share repurchases while simultaneously reducing the need to repatriate dividends from abroad. Endogeneity could be a concern because firms might simultaneously make choices about repatriations and other financial policies. For example, plans for high levels of domestic capital expenditures could require repatriations, giving rise to a positive correlation between domestic capital expenditures and repatriations.

These potential problems can be addressed by instrumenting for repatriations, R_{it} . Characteristics that are predetermined in relation to the enactment of the HIA and that identify firms that were likely to place the greatest value on the tax holiday can be used to isolate the variation in repatriations that is a consequence of the tax holiday. Specifically, in this estimation approach, a first stage regression explains repatriations using these characteristics interacted with a dummy that is equal to 1 in 2005, the year of the tax holiday, and zero in other years. This regression includes firm fixed effects to control for the effect of these characteristics that are common across time and year fixed effects to absorb annual differences in repatriations that are common across firms. This approach effectively isolates firms that, due to the HIA, experienced the largest decrease in the costs of accessing earnings retained abroad. First-stage tests reveal

whether repatriations in 2005 did reflect a response to the tax incentive in the HIA, and second-stage tests reveal how firms that experienced the largest HIA-driven decreases in the costs of accessing retained earnings abroad altered their behavior, relative to other firms. This identification approach also has the advantage of making it unlikely that the estimated effects of repatriations pick up the effect of other provisions of the AJCA or other events in 2005.

As the discussion of U.S. international tax policy in Section II illustrates, firms that should place the highest value on a repatriation tax holiday are those that (i) face lower corporate tax rates abroad and (ii) have an affiliate that is a holding company or in a tax haven. The first instrument is constructed by interacting a dummy for 2005 with an indicator that captures the tax costs of repatriating earnings. These tax costs are calculated using Compustat data by subtracting foreign taxes paid (data item 64) from the product of a firm's foreign pretax income (data item 273) and the U.S. statutory tax rate, with the maximum of this difference or zero scaled by total firm assets. Foley et al. (2007) describe this measure in more detail and show that it explains differences in the extent to which U.S. based firms hold cash abroad. The indicator is equal to one if the estimated incremental U.S. tax burden is greater than the median value for the sample in 2004. The second instrument is intended to capture whether firms have structures that allow them to relocate earnings among foreign countries without triggering repatriation taxes. Existing research indicates that firms often use holding companies or affiliates in tax havens to accomplish this objective. The second instrument is therefore constructed by interacting a dummy for 2005 with an indicator variable equal to one if the U.S. parent has an affiliate that is

located in a tax haven or has an affiliate that is a holding company.¹⁶ This indicator is based on organizational structure as it existed in 2004, prior to repatriations under the HIA.

This estimation approach requires two assumptions concerning exclusion restrictions. First, levels of foreign taxes paid and foreign earnings in 2004 are assumed to be exogenous to the decision of how much to repatriate under the HIA. Levels of foreign taxes and foreign earnings are primarily driven by the location of foreign investments and the economic conditions and tax policies in those locations, factors that are unlikely to be jointly determined with incremental repatriations due to the HIA. Second, the existence of tax haven and holding company affiliates in 2004 is also assumed to be exogenous to the decision of how much to repatriate under the HIA. These structures take a considerable amount of time to establish, so this assumption seems reasonable.¹⁷

Figure 3 graphs mean repatriations for firms defined as having either low or high benefits from the tax holiday using these two instruments. More specifically, firms are defined as having high benefits from the tax holiday if they (i) face lower corporate tax rates abroad and (ii) have an affiliate that is a holding company or in a tax haven. Firms that do not meet both of these criteria are defined as having low benefits from a tax holiday. The sample includes the balanced panel of firms for which data are available from 2001 to 2005. The figure shows that firms

¹⁶ Holding company affiliates are affiliates with an international survey industry code of 5512. These affiliates allow U.S. parent companies to indirectly own affiliates elsewhere, thereby facilitating the deferral of U.S. taxes. Countries are identified as tax havens based on the definition in Hines and Rice (1994).

¹⁷ It is possible that firms that faced lower tax rates abroad shaped the specific provisions of the HIA through their lobbying activity. This would only violate the exclusion restrictions, however, if some characteristic correlated with the instruments induced firms to engage in lobbying and had an effect on the outcomes of interest (such as investment or repurchases) in 2005 that was independent from its effect through repatriations.

classified as having higher benefits from the tax holiday significantly increased mean repatriations from \$23.4 million in 2004 to \$122.0 million in 2005. In sharp contrast, firms assessed as having lower benefits from the tax holiday based on the two instruments had only a small increase in mean repatriations, with repatriations increasing from \$17.2 million in 2004 to \$31.9 million in 2005. This provides preliminary evidence that the instruments successfully identify firms that saw the largest increase in repatriations under the HIA.

[INSERT FIGURE 3 HERE]

The first-stage regressions reported in Table II more formally test the strength of these instruments. Column 1 presents results of regressing the instruments on dividend repatriations scaled by lagged consolidated assets with no controls. Column 2 includes the full set of controls. All regressions include firm and year fixed effects. The tables report the within-firm R^2 and heteroskedasticity-consistent standard errors that have been adjusted for clustering at the firm level. In each specification the coefficients on the instruments are positive and highly significant, implying that firms with a high tax cost of repatriating earnings and firms that have an affiliate located in a tax haven or classified as a holding company increased repatriations significantly more than other firms in 2005.¹⁸ The last row of Table II provides the results of Wald tests for

¹⁸ Instruments based on continuous measures of tax rates are not as effective at identifying changes in repatriations as binary measures. This could reflect that what is most important to firms is not exactly how high or low their foreign tax burden is, but instead the threshold at which repatriations would generate additional tax costs for the firm. See the Internet Appendix for further discussion of these issues.

the significance of the instruments and indicates that the null hypothesis of weak instruments can be rejected.¹⁹

[INSERT TABLE II HERE]

The fact that firms decided to take advantage of the tax holiday to repatriate such large amounts of cash to the U.S. and that the firms that repatriated the most were those firms likely to face the highest tax costs of repatriation prior to the holiday indicates that the repatriation tax does affect the allocation of cash within the firm. Without repatriation taxes, firms would return more of their foreign earnings to the U.S.

V. Firms' Responses to the HIA

A. Domestic and Firm-wide Responses

Table III presents results of tests of the impact of repatriations on U.S. capital expenditures, U.S. employment compensation, and R&D. This table and several that follow present two specifications for each outcome variable. The first is based on equation (1) and is similar to those used in previous studies of the impact of the HIA. The second is an instrumental variables (IV) specification that uses the two instruments for repatriations discussed in Section IV. Both specifications include firm and year fixed effects and report heteroskedasticity-consistent standard errors clustered by firm in parentheses.

¹⁹ The Wald test satisfies the “rule-of-thumb” criteria in Staiger and Stock (1997) which finds instruments are weak if the first-stage F-statistic is less than 10. The test also satisfies the Stock and Yogo (2005) bias criteria.

[INSERT TABLE III HERE]

The dependent variable in columns 1 and 2 of Table III is U.S. capital expenditures scaled by lagged firm consolidated assets. The 0.0212 coefficient on repatriations in column 1 is small in magnitude and insignificant. It implies that increases in repatriations are not significantly correlated with increases in domestic capital expenditures over the sample period. In the IV specification in column 2, the coefficient on repatriations is close to zero and remains insignificant. This estimate implies that those firms that repatriated an extra \$1 of earnings from abroad under the HIA invested less than one cent more domestically. The small coefficient and the standard error of 0.1272 rule out the possibility that increased repatriations had a large positive effect on domestic investment at the repatriating firms.

These specifications include controls for the determinants of investment that are standard in previous work. The coefficient on lagged leverage is negative, as in Lang, Ofek, and Stulz (1996) and other studies. The coefficient on lagged Tobin's q is positive, as is the coefficient on lagged profitability. Lagged cash is insignificant in explaining investment.

The specifications in columns 3 through 6 of Table III repeat these tests, analyzing U.S. employment compensation and R&D spending, both scaled by lagged consolidated assets. None of the coefficients on repatriations is significant, and those in the IV specifications are negative. Alternative measures of employment yield similar results, including U.S. employment compensation less CEO compensation scaled by lagged consolidated assets or the change in U.S.

employment scaled by lagged consolidated firm employment. The results in Table III indicate that the decreased costs of accessing internal capital under the HIA did not increase domestic investment, employment, or R&D in 2005.

Table IV repeats this analysis for three other measures of firm activity: parent debt, the change in consolidated net property, plant and equipment (net PPE), and CEO compensation, with each variable scaled by lagged consolidated assets. It is informative to analyze changes in net PPE because such changes capture the impact of acquisitions while capital expenditures does not. The coefficients on repatriations in the OLS and IV specifications are again insignificant for each of these outcome variables, therefore providing no evidence that firms that increased repatriations under the HIA paid down debt, increased their scale through acquisitions, or increased management compensation.²⁰

[INSERT TABLE IV HERE]

Table V analyzes the effects of repatriations on firm payouts to shareholders scaled by lagged assets, with payouts defined as the sum of dividends and share repurchases. The coefficient on repatriations is positive and marginally significant in the OLS specification in column 1. The IV results in column 2, however, suggest that the impact of repatriations under

²⁰ This measure of executive compensation does not incorporate the potential indirect effects of repatriations on executives' income or wealth through changes in dividends, share repurchases or share prices.

the HIA on payouts is larger and statistically significant.²¹ This estimate implies that a \$1 increase in repatriations under the HIA spurred a \$0.92 increase in payouts to shareholders, although the large standard errors suggest that this coefficient is not precisely estimated.²²

[INSERT TABLE V HERE]

In order to understand better the relation between repatriations and shareholder payouts, columns 3 through 6 of Table V display the results of repeating the analysis in columns 1 and 2 for the two components of payouts: dividends and share repurchases. The coefficients on repatriations are positive in each column but only large and significant in the IV specification that explains share repurchases. This indicates that the main effect of higher repatriations on payouts occurred through increased share repurchases instead of increased dividend payments. The 0.7893 coefficient on repatriations in column 6 suggests that a \$1 increase in repatriations under the HIA increased repurchases by \$0.79.²³

²¹ The OLS estimates of the effect of repatriations are considerably smaller than the IV results. The OLS results could be biased downward for a number of reasons. For example, domestic cash flows are not observed, and if payouts were higher and repatriations were lower when these flows are higher, this set of relationships would generate a negative bias on the repatriation coefficient. The inclusion of year and firm fixed effects also has a large impact on estimates in the OLS specifications because they absorb most of the variation in repatriations. In contrast, the IV specifications identify effects using heterogeneity in 2005 repatriations that is induced by differences in how firms responded to the HIA. A simple OLS regression of payouts on repatriations with no controls and no fixed effects yields a coefficient estimate of 0.4882 on repatriations with a standard error of 0.0811.

²² Faulkender and Petersen (2009) raise the concern that this result could reflect different time trends in the payout behavior of different types of firms. To address this issue, it is possible to include a time trend for firms that repatriated during the tax holiday. The results are qualitatively and quantitatively similar to those shown, and they appear in the Internet Appendix.

²³ Due to the large standard errors, however, the 95% confidence interval suggests that a \$1 increase in repatriations corresponds to an increase in repurchases between \$0.06 and \$1.51.

This series of results provides evidence that the primary domestic impact of the repatriations under the HIA tax holiday was to increase share repurchases. Although the two forms of shareholder payouts analyzed in Table V—share repurchases and dividends—are equivalent in simple models of the firm without taxes and with perfect information, it is not surprising that firms chose to return the repatriated cash to shareholders mainly through share repurchases. The ability to access foreign cash at a lower cost was transitory. Research indicates that share repurchases do not imply as much of a commitment to make regular distributions as dividend payments, so firms would have been more likely to respond to this temporary change by repurchasing shares instead of paying dividends.²⁴

Although the coefficients on repatriations in explaining payouts and repurchases are significant, they are not precisely estimated. Aggregate data indicate that the effect of repatriations on payouts to shareholders is large, but not as large as the 0.92 estimate implies. Firms in the sample that repatriated earnings in 2005 increased their aggregate repatriations by \$207 billion relative to 2004 levels and increased their payouts to shareholders by \$139 billion. A back-of-the-envelope calculation using aggregate data therefore suggests that a \$1 increase in repatriations is associated with a \$0.67 change in total payouts.

To explore this issue further, it is informative to repeat the previous regression analysis, with payouts and repatriations measured in levels rather than as scaled variables. Aggregate comparisons are based on levels, and scaling could affect the magnitude of coefficients.

Columns 1 and 2 of Table VI repeat the tests in columns 1 and 2 of Table V but modify the

²⁴ See Bray, Graham, Harvey and Michael (2005) which surveys financial executives and finds that managers view repurchases as more flexible than dividends.

specification so that payouts, repatriations, and each of the controls are not scaled; lagged consolidated assets is instead included as a control. The coefficient on repatriations in the IV specification remains statistically significant, but its 0.6049 magnitude is closer to the size of the effect suggested by the rough calculation based on the aggregate data.²⁵

[INSERT TABLE VI HERE]

The other columns in Table VI present results of robustness tests of the results in Table III. More specifically, columns 3-6 analyze the effects of repatriations on U.S. capital expenditures and U.S. employment compensation using variables measured in levels. As in the tests using scaled variables, repatriations have small and statistically insignificant effects on domestic activity. The Internet Appendix contains results of the first stage specifications for the IV tests shown in Table VI, as well as the results of several other additional robustness tests.²⁶

Taken together, the results in Tables III-VI suggest that repatriations did not alleviate financial constraints. Firms that valued the tax holiday the most and took greatest advantage of it did not increase domestic investment or employment, but instead they returned well over half of

²⁵ The Internet Appendix contains results of similar levels specifications that divide payouts into dividends and share repurchases. In the IV specifications, the coefficient on repatriations in explaining dividends is a statistically significant 0.1747, which is slightly higher than in the scaled specifications. The coefficient on repurchases is a statistically significant 0.3367, which is lower than in the scaled specifications.

²⁶ For example, to test if firms initially kept any repatriations in cash or other liquid assets and then used them to increase domestic expenditures in the following years, the tests in Table III were repeated replacing each of the dependent variables in 2005 with three-year averages over 2005 through 2007. The regression results, which appear in the Internet Appendix, are very similar to those in the paper. Firms also do not seem to have increased cash holdings in response to the HIA in order to ensure greater financial flexibility in the future, and controlling for foreign earnings in each year does not affect the main results.

the cash they repatriated to shareholders.²⁷ This behavior is consistent with simple models of the firm which show that if firms are not capital constrained and are well-governed, they will return excess cash to shareholders. Managers do not appear to have used the repatriated cash to increase management compensation or to engage in empire building through acquisitions or increased investment.

B. Further Evidence on Financial Constraints

The previous section shows that firms did not increase domestic investment when they were able to access retained earnings abroad at lower costs, a finding which is inconsistent with the argument by many advocates of the HIA that firms were financially constrained. To further explore the validity of this argument, this section considers the prevalence of financial constraints among U.S. multinationals. It analyzes whether such constraints affected investment responses to the HIA and examines if firms engaged in round tripping.

If U.S. MNEs were not financially constrained at the time of the HIA, they should have been able to raise new capital at a reasonable cost if they needed domestic liquidity; they would not be reliant on capital held abroad. Because there is little agreement on the best way to measure financial constraints, it is informative to look for evidence of constraints using multiple

²⁷ Redmiles (2008) and several press accounts indicate that the beneficiaries of the HIA were concentrated in the pharmaceutical industry. Removing firms in this industry does not alter the main results. It has also been widely reported that repatriations may have been highly skewed, with several firms repatriating more than \$10 billion. Removing these firms from the sample also does not change the key findings discussed in this paper.

measures.²⁸ This analysis considers six measures. First, the Kaplan-Zingales index is estimated using 2004 data following Baker, Stein and Wurgler (2003) by using the coefficient estimates from Kaplan and Zingales (1997).²⁹ The bottom one-third of firms based on this index is classified as financially constrained. Second, firms are classified as constrained using payout data if they do not pay dividends or repurchase shares in 2004. Third, firms are defined as constrained if their ratio of total payouts to operating income is less than or equal to 0, following Almeida, Campello and Weisbach (2004). Fourth, firms are classified as constrained if they do not have an investment grade bond rating in 2004, with investment grade defined as an S&P long-term debt rating of at least BBB-. The final two measures of financial constraints are those used in Faulkender and Petersen (2009). One measures the percent of years from 2000 through 2003 during which each firms' internal cash flow was insufficient to finance its investment, and the other measure is this percent interacted with a dummy equal to 1 for firms that do not have a bond rating in 2003.

Table VII reports these six measures of constraints for the full set of Compustat firms and the subsets of multinational and non-multinational firms. Multinationals are defined as those firms that report pretax foreign income (data item 273). For each of these measures, multinationals appear less constrained than other firms in Compustat. A substantial fraction of

²⁸ For example, see Almeida, Campello and Weisbach (2004) which argues that the Kaplan-Zingales index is negatively correlated with other measures of constraints. Also see Campello, Graham, and Harvey (forthcoming) which compares different measures of constraints to new survey evidence on firm constraints.

²⁹ The index is calculated as: $KZ_{it} = -1.002 CF_{it}/A_{it-1} - 39.368 DIV_{it}/A_{it-1} - 1.315 C_{it}/A_{it-1} + 3.139 LEV_{it} + 0.283 Q_{it}$; where CF_{it}/A_{it-1} is cash flow over lagged assets; DIV_{it}/A_{it-1} is cash dividends over assets; C_{it}/A_{it-1} is cash balances over assets; LEV_{it} is leverage; and Q_{it} is Tobin's q . All variables used to calculate the index are winsorized at the 1% level.

multinationals are classified as being constrained using each measure, however, and these firms might have increased investment in response to the HIA.

[INSERT TABLE VII HERE]

This hypothesis is tested in Table VIII, which repeats the test presented in column 2 of Table III. The top two panels show results splitting firms into those that are classified as being constrained or unconstrained according to each of the six measures of financial constraints. The table only reports the coefficient estimates on repatriations. The estimates indicate that no matter which measure of financial constraints is used, firms classified as being constrained did not significantly increase U.S. investment—the same result as for the full sample of firms. Repeating this analysis to test for effects on U.S. employment compensation and R&D expenditures yields the same finding.³⁰ Repatriations under the HIA are not associated with increased domestic investment, employment or R&D activity, even for U.S. multinational companies that appear to be financially constrained.

[INSERT TABLE VIII HERE]

³⁰ Results are similar if the dependent variable is the change in cash holdings or the change in parent debt scaled by lagged consolidated assets. These results suggest that firms that appear to be financially constrained do not hold onto larger amounts of cash or pay down larger amounts of debt.

Common measures of financial constraints may not be appropriate for measuring if MNEs were domestically constrained because of the tax costs of accessing foreign earnings. It is possible that firms that lobbied extensively for the Act were financially constrained domestically in a way that is difficult to observe using consolidated firm data. Many firms lobbied extensively for a lower tax on repatriations, and as part of this lobbying effort, they claimed they would use the repatriations to increase investment and R&D and hire workers. To test whether these firms may have been constrained in a way not captured by traditional measures, the bottom panel of Table VIII repeats the analysis in the top panels, but it divides the sample of firms in three different ways based on their lobbying activities. Columns 1 and 2 present results for firms that were and were not members of the Homeland Investment Coalition (HIC)—the coalition formed with the sole purpose of lobbying to reduce the tax rate on U.S. repatriations. Columns 3 and 4 present results for subsamples created on the basis of whether the firm’s political action committee made contributions to key politicians directly responsible for crafting the HIA tax legislation, namely members of the Senate Finance and House Ways and Means Committees.³¹ Because it is impossible to identify which contributions were targeted specifically at reducing the tax rate on repatriations, columns 5 and 6 present results for subsamples based on whether firms increased their contributions to these tax-writing committees in 2003 and 2004 when the HIA was being debated relative to their contributions in 2000 and 2001. For each subsample, the

³¹ These data are from the Federal Election Commission website (www.fec.gov). Political contributions include dollar contributions plus the estimated dollar value of “in kind” contributions and “independent expenditures on behalf of candidate”. The data do not include contributions from individuals, “friends of” committees, or issue groups. The dataset has information on over 63,000 contributions to members of the House Ways and Means and Senate Finance Committees from 1999 through 2006.

estimated effect of repatriations on domestic investment is insignificant. No matter which of the lobbying measures is utilized, repatriations in response to the holiday by firms that lobbied for the HIA did not significantly increase investment in the United States. This analysis yields similar results if the dependent variable is U.S. employment compensation or R&D expenditures.

A final test of the extent to which firms were financially constrained analyzes the relation between repatriations from affiliates to parents and provisions of new paid-in equity capital from parents to affiliates before and during the tax holiday. If the domestic operations of U.S. multinationals were financially constrained around the time of the tax holiday, repatriations should be negatively correlated with infusions of new equity capital to foreign affiliates. Alternatively, if firms reinvested earnings abroad in illiquid assets prior to the HIA, they might decide to take advantage of the holiday and change the financing of these assets by increasing paid-in capital and repatriating retained earnings. This would generate a positive correlation between repatriations and equity infusions around the time of the holiday.

Table IX presents the results of tests for a relationship between repatriations scaled by lagged consolidated firm assets and equity provisions from U.S. parent companies to their foreign affiliates. The specification in column 1 regresses repatriations in a particular year on a dummy equal to one if the parent provided equity to its affiliate in that year and this same variable interacted with a dummy variable equal to one in the year 2005. The analysis illustrates correlations rather than causality. The negative but insignificant coefficient on the Positive Equity Provision Dummy suggests that during all years except for the tax holiday, firms in which U.S. parents increased their equity investment in affiliates abroad repatriated less earnings. The

positive and significant coefficient on the Positive Equity Provision Dummy interacted with the 2005 Dummy, however, shows that in 2005 the relationship between new parent equity infusions abroad and repatriations was positive and significantly different from that in previous years.

[INSERT TABLE IX HERE]

Column 2 of Table IX repeats the same regression with the four control variables used in the other regressions, and columns 3 and 4 report the same regressions except measure equity provisions from the U.S. parent to the foreign affiliate in the current and prior year instead of just the current year. In column 4, the coefficient on the Positive Equity Provision Dummy is negative and significant, and the coefficient on this dummy interacted with the 2005 Dummy is positive and significant. An F-test reveals that the sum of these coefficients is also positive and significant. These results imply that U.S. multinationals were engaging in round tripping; they were injecting capital from their U.S. parents into their foreign affiliates just as they were repatriating profits to the U.S. from their foreign affiliates at the lower tax rate. Firms that had domestic operations that were financially constrained would not have had funds to invest as new equity abroad. Moreover, the magnitude of this round tripping could have been large. The firms that repatriated \$259 billion in 2005 injected \$104 billion into affiliates abroad over the 2004 to 2005 period.

C. Further Evidence on Governance

Examining how different kinds of firms responded to the HIA also provides information on the role of corporate governance. Agency theory suggests that firms which are poorly governed could use the cash accessed at a lower cost during the tax holiday in ways that do not maximize the return to shareholders. Such cash could reduce constraints on managers and give them more freedom to pursue projects that provide private benefits. Even if poorly governed firms did not spend the repatriated cash immediately, they could retain the cash instead of paying it out to shareholders, possibly in order to have more freedom to pursue projects that do not maximize value in the future.

To assess if firm governance affected how firms responded to the tax holiday, Table X presents results of some of the main specifications estimated on subsamples of firms that are classified as having weak or strong governance. Firms are classified as having weak governance if their Gompers, Ishii, and Metrick (2003) *g* index, as measured in 2004, is equal to or greater than 12, which is roughly the seventy-fifth percentile of this index.³² This subset therefore captures firms that appear to have particularly poor governance. Firms are classified as having strong governance if their index in 2004 has a value of 11 or less. Columns 1 and 2 present results of the specification in column 2 of Table III that explains U.S. capital expenditures. The estimated coefficient on repatriations is insignificant for firms with weak and strong governance, although it is larger in magnitude for poorly governed firms (0.2921 as opposed to 0.0042). The

³² This index is based on the takeover defenses protecting a firm, either through their corporate charter or through provisions of state corporate law – see Gompers, Ishii, and Metrick (2003), Appendix 1, for details. Although the index is constructed on the basis of antitakeover provisions, it is generally interpreted as a much broader measure of corporate governance, especially of managerial entrenchment and the strength of the disciplining effect on managers of the market.

results in columns 3 and 4 illustrate that repatriations also do not have a significant effect on CEO compensation for either set of firms.

[INSERT TABLE X HERE]

The results in columns 5 and 6, however, show a difference between the two subsamples in the relationship between repatriations and payouts.³³ More specifically, firms with reasonably strong governance have a significant positive effect of repatriations under the HIA on payouts, while firms with weak governance have an insignificant and approximately zero effect of repatriations on payouts.³⁴ These findings imply that poorly governed firms did not respond to the HIA by returning funds to shareholders; this effect is only apparent among better-governed firms.³⁵ Although these results do not pinpoint what happened to funds that were repatriated by firms with weak governance, they are consistent with the hypothesis that when well-governed firms that are not financially constrained gain access to an internal source of cash, they return it to shareholders.

VI. Conclusion

³³ Similar results are obtained using alternative measures of corporate governance, including the entrenchment index constructed by Bebchuk, Cohen and Ferrell (2009) and a measure of whether a firm is being investigated by the SEC for alleged financial reporting violations. See the Internet Appendix for a discussion of the tests using these measures.

³⁴ The coefficient estimate of 1.0713 on repatriations in the sample of well governed firms could indicate that these firms increased payouts by more than \$1 for every \$1 of repatriations. The large standard error, however, indicates that the coefficient is imprecisely estimated.

³⁵ This does not support the theory that poorly governed firms used the repatriations to increase executive compensation indirectly by repurchasing shares and thereby increasing the value of executive's stock holdings.

This paper analyzes how firms responded to the temporary reduction in the tax costs of repatriating foreign earnings under the Homeland Investment Act and reaches three main conclusions. First, the domestic operations of U.S. multinationals were not financially constrained at the time of the Act. The ability to access an internal source of capital at a lower cost did not boost domestic investment, domestic employment, or R&D. Statements by Congressmen and lobbyists indicate that they believed that reducing repatriation taxes would increase the domestic activities of U.S. MNEs. This paper's results clearly show that the tax holiday did not have this effect. Even firms that showed some evidence of being financially constrained or that explicitly lobbied for the tax holiday did not increase domestic investment, domestic employment, or R&D. Moreover, around the time of the HIA, repatriations were positively associated with parents sending capital to their foreign affiliates, suggesting that parent companies were round tripping capital in order to repatriate it at the lower tax rate. This behavior is also inconsistent with the view that parent operations were financially constrained.

Second, this paper's results indicate that U.S. multinationals are reasonably well-governed. If U.S. multinationals had serious agency problems, then managers would have been likely to respond to the ability to access cash at a lower cost under the HIA in ways that maximized their private return instead of shareholder value. For example, managers may have increased their own compensation or engaged in empire building through acquisitions or investment. Managers might also have paid down debt in order to reduce future constraints on their operations by reducing their fixed obligations. The results indicate that increases in repatriations under the HIA did not have these effects. Instead, the estimates imply that every

extra dollar of repatriated cash was associated with an increase of \$0.60-\$0.92 in payouts to shareholders, largely in the form of share repurchases. Although this response was concentrated among firms characterized by stronger corporate governance, the results indicate that agency problems were not significant, on average, in the full sample of firms.

Third, the results indicate that the fungibility of money rendered regulations aimed at directing financial policy ineffective. A key goal of the legislation was to increase investment and employment in the United States. The HIA included specific guidelines on how cash repatriated at the lower tax rate could be used in order to promote this goal. This paper clearly shows, however, that these guidelines were ineffective in getting repatriating firms to increase their domestic activities. There is no evidence of a “flypaper” effect for firms. Estimates imply that firms returned most of the repatriated cash to shareholders — even though such expenditures were not a permitted use of repatriations qualifying for the tax holiday. It is important to emphasize that the results do not imply that firms violated any of the provisions of the HIA. Rather, they reflect the fact that cash is fungible. A tax policy that reduces the cost of accessing a particular type of capital will have difficulty affecting how that capital is used. Thus, the overall effect of what firms did differed from what their public statements indicated they would do and from what the regulations ostensibly intended.

Although the HIA does not appear to have spurred domestic investment and employment in firms that used the tax holiday to repatriate earnings from abroad, it may still have benefited the U.S. economy in other ways. The tax holiday encouraged U.S. multinationals to repatriate roughly \$300 billion of foreign earnings, and firms paid out most of these earnings to

shareholders. Presumably these shareholders either reinvested these funds or used them for consumption, thereby having indirect effects on firm investment, employment or spending.³⁶

Future work could explore the welfare effects of the holiday more generally.

Several related questions are prompted by these findings. What are the dynamic effects of tax holidays on repatriations? Will companies repatriate less in the years immediately following the tax holiday as they hope to receive another tax holiday in the future? Congress debated another tax holiday on repatriations as part of a fiscal stimulus package in 2009. Moreover, while the 2005 tax holiday occurred at a time of abundant credit, would a similar tax holiday during the recent crisis have had a different effect because firms faced greater financial constraints? These types of questions are left for future research.

³⁶ See Auerbach and Hassett (1991) and Poterba (1991) for evidence on the extent to which shareholders consume out of corporate payouts. See Shapiro and Slemrod (1995) for evidence that the timing of income affects consumption.

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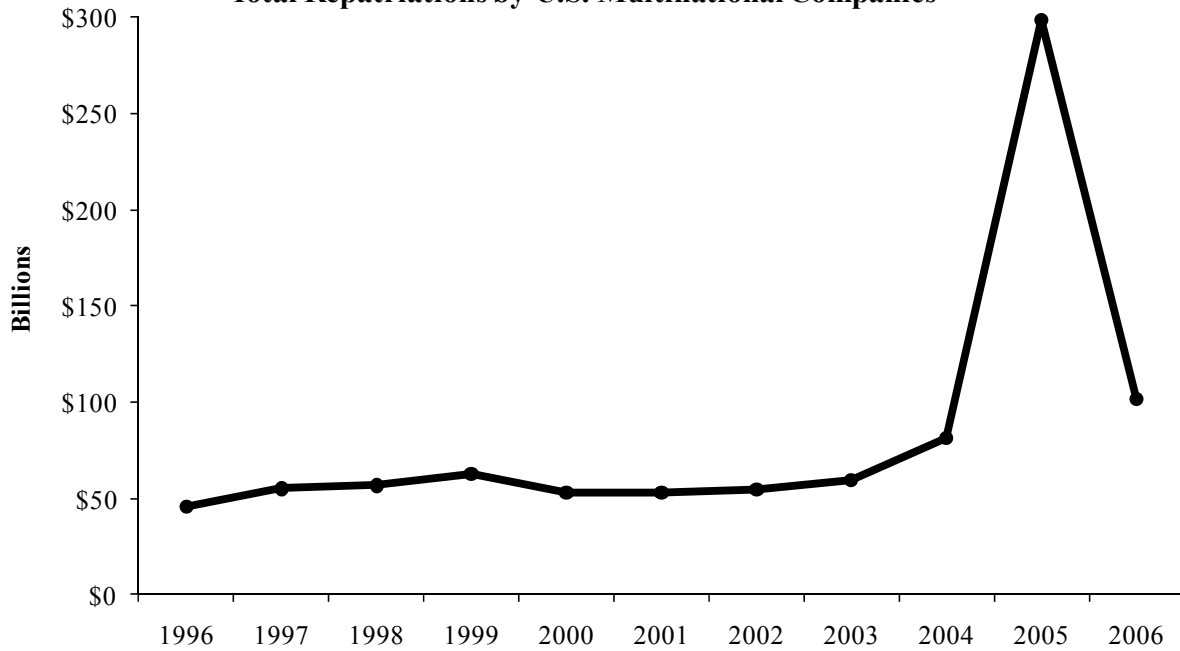
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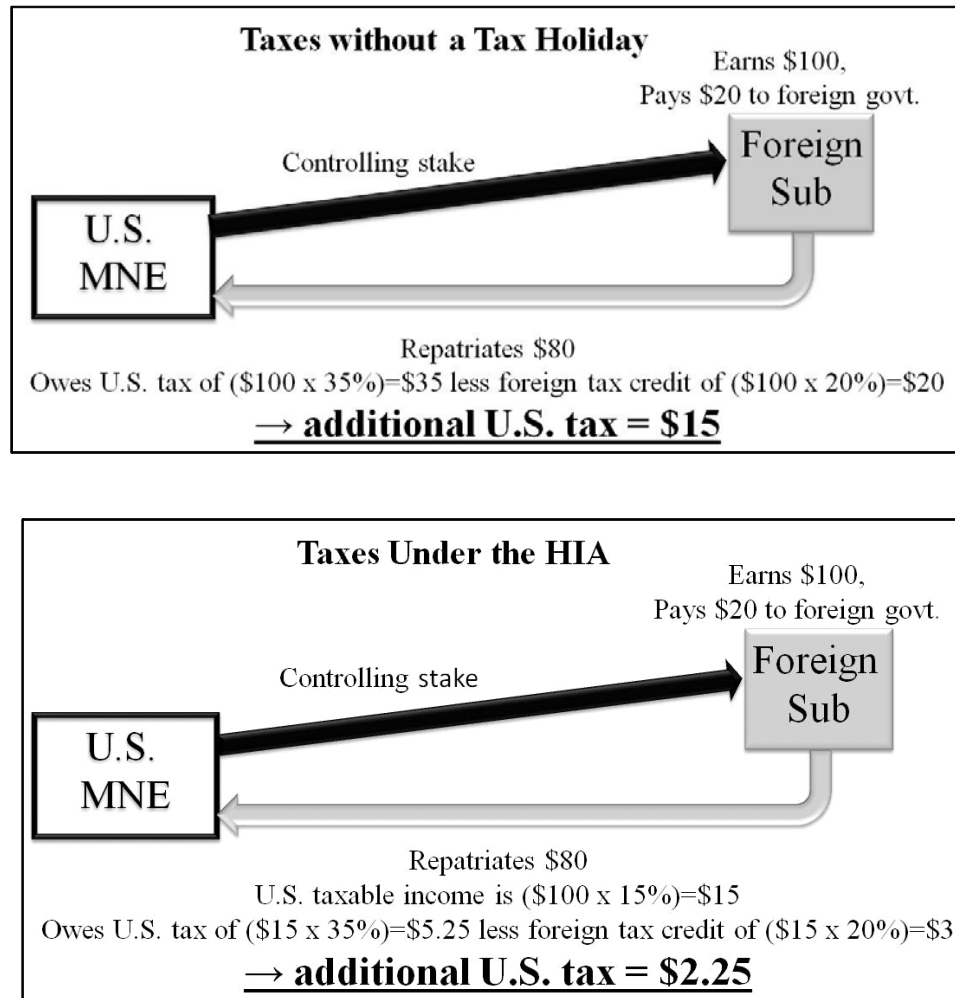
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Figure 1
Total Repatriations by U.S. Multinational Companies



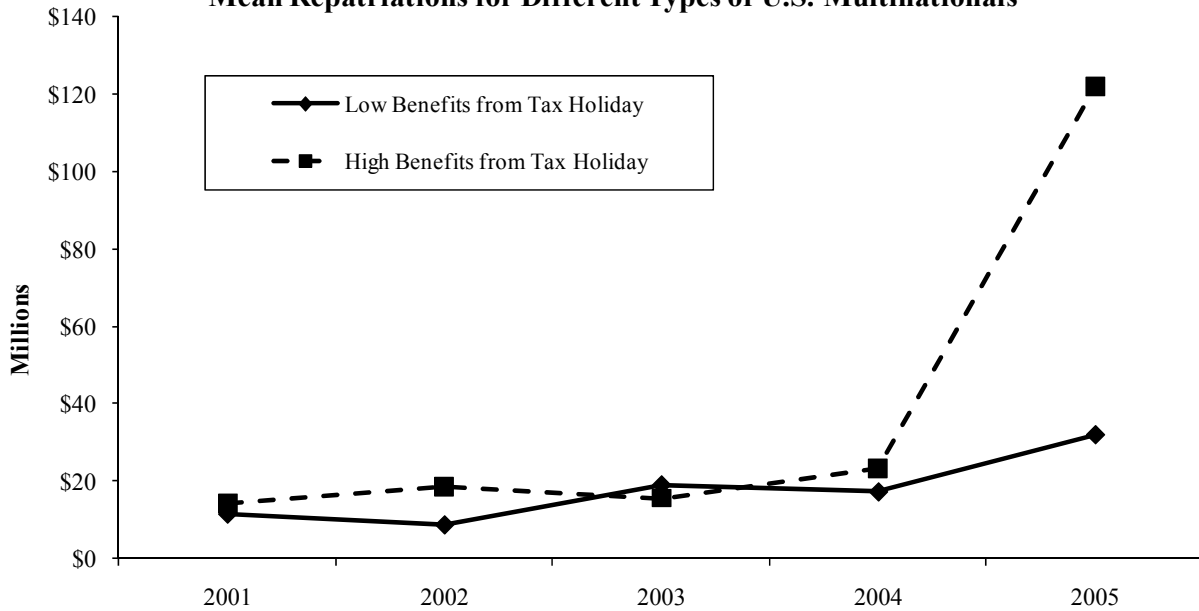
Notes: Data on aggregate repatriations are from the Bureau of Economic Analysis, U.S. International Transactions Accounts Data, Table 7a, line 3 for distributed earnings.

Figure 2
U.S. International Tax System Before and During the HIA



Note: This figure depicts the tax costs of repatriating foreign earnings for a U.S. MNE without a tax holiday in the top panel and under the HIA in the bottom panel. The U.S. corporate tax rate is assumed to be 35%, and the foreign tax rate is assumed to be 20%.

Figure 3
Mean Repatriations for Different Types of U.S. Multinationals



Notes: The sample used to construct this figure includes the balanced panel of firms for which data are available from 2001-2005. The dashed line displays mean repatriations for firms that are expected to have high benefits from a tax holiday. Firms are expected to have high benefits from the tax holiday if, in 2004, they (a) face lower corporate tax rates abroad and (b) have an affiliate that is a holding company or in a tax haven. The solid line displays mean repatriations for firms that do not meet either of these criteria.

Table I
Descriptive Statistics

Notes: This table provides descriptive statistics for the variables used in the analysis that follows. Many of the variables are scaled by lagged consolidated assets, which measures total firm assets. Repatriations are earnings repatriated from foreign affiliates to their parent. U.S. Capital Expenditures measures U.S. MNE investment in the United States, and U.S. Employment Compensation is the value of cash and benefit payments to U.S. employees. R&D is the aggregate research and development expenditures of a firm. Change in Parent Debt is calculated as the first difference of parent company liabilities. Change in Consolidated Net PPE is the first difference of aggregate firm net property, plant, and equipment. CEO Compensation includes salary, bonus, and the value of stock and option grants. Dividends measure cash dividends paid by firms to shareholders, and Repurchases measure purchases of common and preferred stock. Payouts are equal to the sum of dividends and repurchases. Leverage is the ratio of total debt to the sum of total debt and the market value of equity. Tobin's q is calculated as the ratio of the book value of firm assets plus the market value of firm equity less the book value of firm equity to the book value of firm assets. Industry median values of Tobin's q are used if firm specific ones are unavailable. Profitability is calculated as the ratio of consolidated net income to consolidated assets. Unscaled values are measured in '000s.

	<u>Mean</u>	<u>Standard Deviation</u>
Repatriations/Lagged Assets	0.0073	0.0223
U.S. Capital Expenditures/Lagged Assets	0.0393	0.0423
U.S. Employment Compensation/Lagged Assets	0.1998	0.2248
R&D/Lagged Assets	0.0346	0.0539
Change in Parent Debt/Lagged Assets	0.0381	0.1982
Change in Consolidated Net PPE/Lagged Assets	0.0188	0.0852
CEO Compensation/Lagged Assets	0.0023	0.0034
Payouts/Lagged Assets	0.0428	0.0638
Dividends/Lagged Assets	0.0141	0.0220
Repurchases/Lagged Assets	0.0278	0.0554
Lagged Leverage	0.2103	0.2097
Lagged Tobin's q	2.0363	1.4574
Lagged Cash/Lagged Assets	0.1130	0.1398
Lagged Profitability	0.0397	0.1039
U.S. Capital Expenditures	271,336	757,199
U.S. Employment Compensation	968,342	1,920,988
Payouts	373,124	1,083,185
Repatriations	71,153	382,444
Lagged Total Debt	2,121,571	7,549,273
Lagged Market Value of Equity	9,324,322	26,700,000
Lagged Cash	1,310,021	7,387,894
Lagged Net Income	319,806	1,155,022
Lagged Assets	11,700,000	42,800,000

Table II

First-Stage Regressions

Notes: The dependent variable is the earnings repatriated by foreign affiliates to their parent scaled by lagged consolidated assets. The High Tax Costs of Repatriation Dummy is computed using 2004 data by first subtracting foreign taxes paid from the product of a firm's foreign pretax income and the U.S. statutory corporate tax rate. Then the maximum of this difference or zero is scaled by total firm assets. For firms with a ratio above the median sample value, the dummy is set equal to one, and it is set equal to zero otherwise. The Haven or Holding Company Dummy is equal to one for firms that, in 2004, either have operations in a tax haven or use a holding company abroad and is otherwise equal to zero. The 2005 Dummy is equal to one in 2005 and zero in other years. Leverage is the ratio of total debt to the sum of total debt and the market value of equity. Tobin's q is calculated as the ratio of the book value of firm assets plus the market value of firm equity less the book value of firm equity to the book value of firm assets. Industry median values of Tobin's q are used if firm specific ones are unavailable. Lagged Cash/Lagged Assets measures the lagged ratio of consolidated cash holdings to consolidated assets. Profitability is calculated as the ratio of consolidated net income to consolidated assets. Each specification is an OLS specification that includes firm and year fixed effects. Heteroskedasticity-consistent standard errors that correct for clustering at the firm level appear in parentheses. F-statistic for Instruments indicates the results of Wald tests for the joint significance of the instruments following Stock and Yogo (2005). ** and * denote significance at the 5 and 10 percent levels, respectively.

Dependent Variable:	Dividend Repatriations/Lagged Assets	
	(1)	(2)
High Tax Costs of Repatriation Dummy * 2005	0.0128**	0.0127**
Dummy	(0.0030)	(0.0030)
Haven or Holding Company Dummy * 2005	0.0068**	0.0066**
Dummy	(0.0028)	(0.0027)
Lagged Leverage		-0.0025
		(0.0027)
Lagged Tobin's q		-0.0003
		(0.0004)
Lagged Cash/Lagged Assets		0.0098*
		(0.0057)
Lagged Profitability		-0.0053
		(0.0049)
Firm and year dummies?	Y	Y
No. of Obs.	4,921	4,921
R-Squared	0.0562	0.0580
F-Statistic for Instruments	10.91	10.92

Table III

The Effects of Repatriations on U.S. Capital Expenditures, U.S. Employment Compensation, and R&D

Notes: The dependent variable in columns 1 and 2 is the ratio of domestic capital expenditures by U.S. MNEs to lagged consolidated assets. In columns 3 and 4 it is the ratio of U.S. employment compensation to lagged consolidated assets, and in columns 5 and 6 it is research and development expenditures scaled by lagged consolidated assets. Repatriations/Lagged Assets is the earnings repatriated from foreign affiliates to their parent scaled by lagged consolidated assets. Leverage is the ratio of total debt to the sum of total debt and the market value of equity. Tobin's q is calculated as the ratio of the book value of firm assets plus the market value of firm equity less the book value of firm equity to the book value of firm assets. Industry median values of Tobin's q are used if firm specific ones are unavailable. Lagged Cash/Lagged Assets measures the lagged ratio of consolidated cash holdings to consolidated assets. Profitability is calculated as the ratio of consolidated net income to consolidated assets. Each specification includes firm and year fixed effects. The specifications in columns 1, 3, and 5 are OLS specifications, and the specifications in columns 2, 4, and 6 are IV specifications that instrument for Repatriations/Lagged Assets using the High Tax Costs of Repatriation Dummy interacted with the 2005 Dummy and the Haven or Holding Company Dummy interacted with the 2005 Dummy. The High Tax Costs of Repatriation Dummy is computed using 2004 data by first subtracting foreign taxes paid from the product of a firm's foreign pretax income and the U.S. statutory corporate tax rate. Then the maximum of this difference or zero is scaled by total firm assets. For firms with a ratio above the median sample value, the dummy is set equal to one, and it is set equal to zero otherwise. The Haven or Holding Company Dummy is equal to one for firms that, in 2004, either have operations in a tax haven or use a holding company abroad and is otherwise equal to zero. The 2005 Dummy is equal to one in 2005 and zero in other years. Heteroskedasticity-consistent standard errors that correct for clustering at the firm level appear in parentheses. ** and * denote significance at the 5 and 10 percent levels, respectively.

Dependent Variable:	U.S. Capital Expenditures/ Lagged Assets		U.S. Employment Compensation/ Lagged Assets		R&D/ Lagged Assets	
	(1)	(2)	(3)	(4)	(5)	(6)
Repatriations/Lagged Assets	0.0212 (0.0268)	0.0033 (0.1272)	0.0097 (0.0538)	-0.2345 (0.5258)	0.0147 (0.0238)	-0.1454 (0.1242)
Lagged Leverage	-0.0409** (0.0070)	-0.0409** (0.0070)	-0.1639** (0.0283)	-0.1644** (0.0286)	-0.0073* (0.0039)	-0.0077* (0.0040)
Lagged Tobin's q	0.0032** (0.0009)	0.0032** (0.0009)	0.0114** (0.0023)	0.0113** (0.0023)	0.0069** (0.0012)	0.0068** (0.0013)
Lagged Cash/Lagged Assets	-0.0086 (0.0152)	-0.0084 (0.0153)	-0.1031** (0.0386)	-0.1003** (0.0368)	-0.0262** (0.0123)	-0.0243** (0.0128)
Lagged Profitability	0.0223** (0.0079)	0.0222** (0.0079)	-0.0528** (0.0234)	-0.0541** (0.0239)	0.0103* (0.0059)	0.0095 (0.0061)
Firm and year dummies?	Y	Y	Y	Y	Y	Y
Instrument with Haven or Holding Company Dummy * 2005 Dummy and High Tax Costs of Repatriation Dummy * 2005 Dummy?	N	Y	N	Y	N	Y
No. of Obs.	4,508	4,508	4,508	4,508	4,921	4,921
R-Squared	0.1645		0.1161		0.1159	

Table IV

The Effects of Repatriations on Parent Debt, Consolidated Net PPE, and CEO Compensation

Notes: The dependent variable in columns 1 and 2 is the first difference of parent liabilities scaled by lagged consolidated assets. In columns 3 and 4 it is the first difference of consolidated net property, plant, and equipment scaled by lagged consolidated assets, and in columns 5 and 6 it is CEO compensation, including salary, bonus, and the value of stock and option grants, scaled by lagged consolidated assets. Repatriations/Lagged Assets is the earnings repatriated from foreign affiliates to their parent scaled by lagged consolidated assets. Leverage is the ratio of total debt to the sum of total debt and the market value of equity. Tobin's q is calculated as the ratio of the book value of firm assets plus the market value of firm equity less the book value of firm equity to the book value of firm assets. Industry median values of Tobin's q are used if firm specific ones are unavailable. Lagged Cash/Lagged Assets measures the lagged ratio of consolidated cash holdings to consolidated assets. Profitability is calculated as the ratio of consolidated net income to consolidated assets. Each specification includes firm and year fixed effects. The specifications in columns 1, 3, and 5 are OLS specifications, and the specifications in columns 2, 4, and 6 are IV specifications that instrument for Repatriations/Lagged Assets using the High Tax Costs of Repatriations Dummy interacted with the 2005 Dummy and the Haven or Holding Company Dummy interacted with the 2005 Dummy. The High Tax Costs of Repatriation Dummy is computed using 2004 data by first subtracting foreign taxes paid from the product of a firm's foreign pretax income and the U.S. statutory corporate tax rate. Then the maximum of this difference or zero is scaled by total firm assets. For firms with a ratio above the median sample value, the dummy is set equal to one, and it is set equal to zero otherwise. The Haven or Holding Company Dummy is equal to one for firms that, in 2004, either have operations in a tax haven or use a holding company abroad and is otherwise equal to zero. The 2005 Dummy is equal to one in 2005 and zero in other years. Heteroskedasticity-consistent standard errors that correct for clustering at the firm level appear in parentheses. ** and * denote significance at the 5 and 10 percent levels, respectively.

Dependent Variable:	Change in Parent Debt/ Lagged Assets		Change in Consolidated Net PPE/ Lagged Assets		CEO Compensation/ Lagged Assets	
	(1)	(2)	(3)	(4)	(5)	(6)
Repatriations/Lagged Assets	-0.2019 (0.2171)	-0.1195 (1.0324)	0.0719 (0.0899)	0.2855 (0.3846)	-0.0019 (0.0021)	0.0027 (0.0176)
Lagged Leverage	-0.3342** (0.0518)	-0.3341** (0.0515)	-0.1656** (0.0203)	-0.1651** (0.0201)	-0.0035** (0.0007)	-0.0035** (0.0007)
Lagged Tobin's q	0.0075* (0.0045)	0.0075* (0.0046)	0.0085** (0.0019)	0.0086** (0.0019)	0.0004** (0.0001)	0.0004** (0.0001)
Lagged Cash/Lagged Assets	0.0781 (0.0685)	0.0767 (0.0713)	0.0975** (0.0301)	0.0940** (0.0304)	0.0010 (0.0020)	0.0009 (0.0021)
Lagged Profitability	0.0732 (0.0663)	0.0735 (0.0661)	0.0753** (0.0157)	0.0761** (0.0160)	0.0009 (0.0010)	0.0009 (0.0010)
Firm and year dummies?	Y	Y	Y	Y	Y	Y
Instrument with Haven or Holding Company Dummy*2005 Dummy and High Tax Costs of Repatriation Dummy *2005 Dummy?	N	Y	N	Y	N	Y
No. of Obs.	4,176	4,176	4,580	4,580	3,049	3,049
R-Squared	0.0702		0.1185		0.0646	

Table V

The Effects of Repatriations on Dividends and Repurchases

Notes: The dependent variable in columns 3 and 4 is the ratio of cash dividends to lagged consolidated assets; in columns 5 and 6 it is the ratio of repurchases of common and preferred shares to lagged consolidated assets; and in columns 1 and 2 it is the sum of these two. Repatriations/Lagged Assets is the earnings repatriated from foreign affiliates to their parent scaled by lagged consolidated assets. Leverage is the ratio of total debt to the sum of total debt and the market value of equity. Tobin's q is calculated as the ratio of the book value of firm assets plus the market value of firm equity less the book value of firm equity to the book value of firm assets. Industry median values of Tobin's q are used if firm specific ones are unavailable. Lagged Cash/Lagged Assets measures the lagged ratio of consolidated cash holdings to consolidated assets. Profitability is calculated as the ratio of consolidated net income to consolidated assets. Each specification includes firm and year fixed effects. The specifications in columns 1, 3, and 5 are OLS specifications, and the specifications in columns 2, 4, and 6 are IV specifications that instrument for Repatriations/Lagged Assets using the High Tax Costs of Repatriation Dummy interacted with the 2005 Dummy and the Haven or Holding Company Dummy interacted with the 2005 Dummy. The High Tax Costs of Repatriation Dummy is computed using 2004 data by first subtracting foreign taxes paid from the product of a firm's foreign pretax income and the U.S. statutory corporate tax rate. Then the maximum of this difference or zero is scaled by total firm assets. For firms with a ratio above the median sample value, the dummy is set equal to one, and it is set equal to zero otherwise. The Haven or Holding Company Dummy is equal to one for firms that, in 2004, either have operations in a tax haven or use a holding company abroad and is otherwise equal to zero. The 2005 Dummy is equal to one in 2005 and zero in other years. Heteroskedasticity-consistent standard errors that correct for clustering at the firm level appear in parentheses. ** and * denote significance at the 5 and 10 percent levels, respectively.

Dependent Variable:	Payouts/ Lagged Assets		Dividends/ Lagged Assets		Repurchases/ Lagged Assets	
	(1)	(2)	(3)	(4)	(5)	(6)
Repatriations/Lagged Assets	0.1018* (0.0589)	0.9244** (0.4192)	0.0102 (0.0127)	0.1546 (0.1082)	0.0882* (0.0511)	0.7893** (0.3606)
Lagged Leverage	-0.0389** (0.0106)	-0.0363** (0.0112)	-0.0176** (0.0033)	-0.0172** (0.0033)	-0.0144* (0.0086)	-0.0124 (0.0090)
Lagged Tobin's q	0.0038** (0.0019)	0.0042** (0.0020)	-0.0003 (0.0006)	-0.0003 (0.0006)	0.0049** (0.0015)	0.0052** (0.0015)
Lagged Cash/Lagged Assets	0.0707** (0.0181)	0.0605** (0.0182)	0.0121* (0.0068)	0.0105 (0.0067)	0.0544** (0.0138)	0.0450** (0.0139)
Lagged Profitability	0.0486** (0.0103)	0.0522** (0.0119)	0.0094** (0.0034)	0.0101** (0.0034)	0.0406** (0.0086)	0.0440** (0.0102)
Firm and Year Dummies?	Y	Y	Y	Y	Y	Y
Instrument with Haven or Holding Company Dummy*2005 Dummy and High Tax Costs of Repatriation Dummy*2005 Dummy?	N	Y	N	Y	N	Y
No. of Obs.	4,581	4,581	4,848	4,848	4,649	4,649
R-Squared	0.0796		0.0489		0.0675	

Table VI
Levels Specifications

Notes: The dependent variable in columns 1 and 2 is the sum of cash dividends and repurchases of common and preferred shares. In columns 3 and 4 it is the domestic capital expenditures of U.S. MNEs, and in columns 5 and 6 it is U.S. employment compensation. Repatriations are the earnings repatriated from foreign affiliates to their parent. Total Debt, Market Value of Equity, Cash, and Net Income are measured on a consolidated basis. Each specification includes firm and year fixed effects. All values are measured in '000s. The specifications in columns 1, 3, and 5 are OLS specifications, and the specifications in columns 2, 4, and 6 are IV specifications that instrument for Repatriations using the High Tax Costs of Repatriation Dummy interacted with the 2005 Dummy and the Haven or Holding Company Dummy interacted with the 2005 Dummy. The High Tax Costs of Repatriation Dummy is computed using 2004 data by first subtracting foreign taxes paid from the product of a firm's foreign pretax income and the U.S. statutory corporate tax rate. Then the maximum of this difference or zero is scaled by total firm assets. For firms with a ratio above the median sample value, the dummy is set equal to one, and it is set equal to zero otherwise. The Haven or Holding Company Dummy is equal to one for firms that, in 2004, either have operations in a tax haven or use a holding company abroad and is otherwise equal to zero. The 2005 Dummy is equal to one in 2005 and zero in other years. Heteroskedasticity-consistent standard errors that correct for clustering at the firm level appear in parentheses. ** and * denote significance at the 5 and 10 percent levels, respectively.

Dependent Variable:	Payouts		U.S. Capital Expenditures		U.S. Employment Compensation	
	(1)	(2)	(3)	(4)	(5)	(6)
Repatriations	0.2231** (0.0801)	0.6049** (0.2079)	-0.0051 (0.0452)	-0.0415 (0.0784)	0.0372 (0.0900)	-0.0511 (0.1729)
Lagged Total Debt	-0.0147 (0.0146)	-0.0081 (0.0146)	-0.0086 (0.0153)	-0.0092 (0.0156)	-0.0013 (0.0227)	-0.0029 (0.0234)
Lagged Market Value of Equity	0.0122** (0.0029)	0.0125** (0.0028)	0.0059** (0.0019)	0.0058** (0.0020)	0.0010** (0.0025)	0.0010** (0.0026)
Lagged Cash	0.0544** (0.0183)	0.0358 (0.0229)	-0.0242 (0.0183)	-0.0227 (0.0182)	-0.0007 (0.0347)	0.0031 (0.0395)
Lagged Net Income	0.1479** (0.0381)	0.1272** (0.0375)	0.0698** (0.0227)	0.0716** (0.0224)	0.1417** (0.0399)	0.1461** (0.0405)
Lagged Assets	0.0006 (0.0049)	-0.0003 (0.0046)	0.0078** (0.0033)	0.0079** (0.0034)	0.0078 (0.0080)	0.0080 (0.0079)
Firm and year dummies?	Y	Y	Y	Y	Y	Y
Instrument with Haven or Holding Company Dummy * 2005 Dummy and High Tax Costs of Repatriation Dummy * 2005 Dummy?	N	Y	N	Y	N	Y
No. of Obs.	4,546	4,546	4,472	4,472	4,472	4,472
R-Squared	0.3249		0.1781		0.2173	

Table VII
Measures of Financial Constraints

Notes: This table displays six measures of financial constraints for all Compustat firms and for subsamples of multinational and non-multinational firms. Multinational Firms are defined as those firms that report pretax foreign income. The first four columns report the shares of firms that appear to face financial constraints in 2004 according to four different measures. In column 1, firms are identified as being financially constrained if their KZ index, computed following the technique in Kaplan and Zingales (1997), is among the top one third of Compustat firms. In column 2, firms are identified as being financially constrained if they do not pay dividends to common or preferred shareholders or repurchase shares. In column 3, firms are identified as being financially constrained if their ratio of total distributions, which include repurchases and dividends, to operating income is less than or equal to 0, following Almeida, Campello and Weisbach (2004). In column 4, firms are characterized as being financially constrained if their S&P long-term debt rating is below BBB- or if they do not have a rating. Columns 5 and 6 presents averages of the two measures of financial constraints used in Faulkender and Petersen (2009). The first of these is the percent of years from 2000 to 2003 that a firm's internal cash flow was insufficient to finance its investment, and the second is this percent interacted with a dummy equal to one for firms that do not have a bond rating in 2003.

Measure of Financial Constraints:	KZ Index	Payouts	Payouts/Operating Profits	Bond Ratings	Faulkender-Petersen Measure 1	Faulkender-Petersen Measure 2
	(1)	(2)	(3)	(4)	(5)	(6)
All Firms	34.0%	48.1%	55.3%	86.8%	0.584	0.464
Multinational Firms	26.5%	42.0%	45.4%	81.4%	0.496	0.327
Non-Multinational Firms	37.0%	50.4%	59.2%	88.5%	0.609	0.507

Table VIII

Financial Constraints, Lobbying, and the Effects of Repatriations on U.S. Capital Expenditures

Notes: The dependent variable is the ratio of domestic capital expenditures by U.S. MNEs to lagged consolidated assets.

Repatriations/Lagged Assets is the earnings repatriated from foreign affiliates to their parent scaled by lagged consolidated assets. Each specification includes as controls lagged leverage, lagged Tobin's q , lagged cash/lagged assets, and lagged profitability. Each specification includes firm and year fixed effects. The specifications are IV specifications that instrument for Repatriations/Lagged Assets using the High Tax Costs of Repatriation Dummy interacted with the 2005 Dummy and the Haven or Holding Company Dummy interacted with the 2005 Dummy. The High Tax Costs of Repatriation Dummy is computed using 2004 data by first subtracting foreign taxes paid from the product of a firm's foreign pretax income and the U.S. statutory corporate tax rate. Then the maximum of this difference or zero is scaled by total firm assets. For firms with a ratio above the median sample value, the dummy is set equal to one, and it is set equal to zero otherwise. The Haven or Holding Company Dummy is equal to one for firms that, in 2004, either have operations in a tax haven or use a holding company abroad and is otherwise equal to zero. The 2005 Dummy is equal to one in 2005 and zero in other years. The top two panels examine subsamples of firms that do and do not appear to face financial constraints. In the top panel, the samples in the first two columns, respectively, include firms with a KZ index, computed following Kaplan and Zingales (1997) using 2004 data, that is among the top third of all Compustat firms and firms with lower values of the KZ index. The samples in the third and fourth columns, respectively, include firms that did not and did pay dividends or repurchase shares. In columns 5 and 6, firms are identified as being financially constrained if their ratio of total distributions to operating income is less than or equal to 0, following Almeida, Campello and Weisbach (2004). In the first two columns of the second panel, firms are characterized as being financially constrained if their S&P long-term debt rating is below BBB- or if they do not have a rating. In the remaining four columns, firms are classified as being financially constrained on the basis of whether the measures used in Faulkender and Petersen (2009) exceed zero. The first of these is the percent of years from 2000 to 2003 that a firm's internal cash flow was insufficient to finance its investment, and the second is this percent interacted with a dummy equal to one for firms that do not have a bond rating. The bottom panel presents results for subsamples of firms that do and do not appear to have lobbied for the passage of the HIA. The samples in the first two columns, respectively, include members of the Homeland Investment Coalition and all other firms. The samples in the third and fourth columns, respectively, include firms that made contributions to the Senate Finance Committee or the House Ways and Means Committee in 2003 or 2004 and those that did not. The samples in the last two columns, respectively, include firms that increased their contributions to the Senate Finance Committee or the House Ways and Means Committee in 2003-2004 relative to 2000-2001 and those that did not. Heteroskedasticity-consistent standard errors that correct for clustering at the firm level appear in parentheses. ** and * denote significance at the 5 and 10 percent levels, respectively.

Dependent Variable:	U.S. Capital Expenditures/Lagged Assets					
Financially-Constrained Subsample:	KZ Index		Payouts		Payouts/Operating Profit	
	Yes	No	Yes	No	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)
Repatriations/Lagged Assets	0.0292 (0.9624)	0.0549 (0.1619)	-0.0949 (0.7079)	-0.0027 (0.1135)	-0.1538 (0.7133)	-0.0003 (0.1148)
No. of Obs.	1,021	2,917	927	3,360	953	3,334
Financially-Constrained Subsample:	Bond Rating		Faulkender-Petersen Measure 1		Faulkender-Petersen Measure 2	
	Yes	No	Yes	No	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)
Repatriations/Lagged Assets	-0.4825 (0.4125)	0.1052 (0.1048)	0.0482 (0.3053)	-0.0107 (0.0871)	-0.0674 (1.1324)	0.0598 (0.1172)
No. of Obs.	2,441	2,067	2,544	1,706	810	3,423
Lobbying Subsample:	HIC Member		Contributor in 2003-04		Increase in 2003-04	
	Yes	No	Yes	No	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)
Repatriations/Lagged Assets	0.2031 (0.3505)	-0.0304 (0.1606)	0.0609 (0.1125)	-0.2248 (0.2993)	0.1107 (0.1444)	-0.1361 (0.1991)
No. of Obs.	236	4,272	1,083	3,413	732	3,769

Table IX

Repatriations and Liquidity Provisions

Notes: The dependent variable is the earnings repatriated from foreign affiliates to their parent scaled by lagged consolidated assets. Positive Equity Provision Dummy measures parent firm investments of new equity abroad. In columns 1 and 2, it is equal to one if the parent invested new equity abroad in the year repatriations are measured and is otherwise equal to zero. In columns 3 and 4, it is equal to one if the parent invested new equity abroad in the year repatriations are measured or the year before and is otherwise equal to zero. The 2005 Dummy is equal to one in 2005 and zero in other years. Leverage is the ratio of total debt to the sum of total debt and the market value of equity. Tobin's q is calculated as the ratio of the book value of firm assets plus the market value of firm equity less the book value of firm equity to the book value of firm assets. Industry median values of Tobin's q are used if firm specific ones are unavailable. Lagged Cash/Lagged Assets measures the lagged ratio of consolidated cash holdings to consolidated assets. Profitability is calculated as the ratio of consolidated net income to consolidated assets. Each specification is an OLS specification that includes firm and year fixed effects. Heteroskedasticity-consistent standard errors that correct for clustering at the firm level appear in parentheses. ** and * denote significance at the 5 and 10 percent levels, respectively.

Dependent Variable:	Repatriations/Lagged Assets			
	(1)	(2)	(3)	(4)
Positive Equity Provision Dummy	-0.0005 (0.0006)	-0.00010 (0.0006)	-0.0012* (0.0006)	-0.0013** (0.0007)
Positive Equity Provision Dummy * 2005 Dummy	0.0073** (0.0034)	0.0072** (0.0034)	0.0081** (0.0031)	0.0083** (0.0031)
Lagged Leverage		-0.0024 (0.0021)		-0.0029 (0.0023)
Lagged Tobin's q		-0.0004 (0.0003)		-0.0007* (0.0004)
Lagged Cash/Lagged Assets		0.0104** (0.0048)		0.0164** (0.0057)
Lagged Profitability		-0.0035 (0.0037)		-0.0051 (0.0042)
Firm and year dummies?	Y	Y	Y	Y
Positive Equity Provision measured as concurrent value?	Y	Y	N	N
Positive Equity Provision measured as lagged plus concurrent value?	N	N	Y	Y
No. of Obs.	7,383	6,900	6,051	5,670
R-Squared	0.0350	0.0374	0.0417	0.0469

Table X**Governance and the Effects of Repatriations on U.S. Capital Expenditures, CEO Compensation, and Payouts**

Notes: The dependent variable in columns 1 and 2 is the ratio of domestic capital expenditures by U.S. MNEs to lagged consolidated assets. In columns 3 and 4, it is CEO compensation, including salary, bonus, and the value of stock and option grants, scaled by lagged consolidated assets, and in columns 5 and 6, it is the sum of cash dividends and repurchases of common and preferred shares scaled by lagged consolidated assets. Repatriations/Lagged Assets is the earnings repatriated from foreign affiliates to their parent scaled by lagged consolidated assets. Leverage is the ratio of total debt to the sum of total debt and the market value of equity. Tobin's q is calculated as the ratio of the book value of firm assets plus the market value of firm equity less the book value of firm equity to the book value of firm assets. Industry median values of Tobin's q are used if firm specific ones are unavailable. Lagged Cash/Lagged Assets measures the lagged ratio of consolidated cash holdings to consolidated assets. Profitability is calculated as the ratio of consolidated net income to consolidated assets. Each specification includes firm and year fixed effects. The specifications are IV specifications that instrument for Repatriations/Lagged Assets using the High Tax Costs of Repatriation Dummy interacted with the 2005 Dummy and the Haven or Holding Company Dummy interacted with the 2005 Dummy. The High Tax Costs of Repatriation Dummy is computed using 2004 data by first subtracting foreign taxes paid from the product of a firm's foreign pretax income and the U.S. statutory corporate tax rate. Then the maximum of this difference or zero is scaled by total firm assets. For firms with a ratio above the median sample value, the dummy is set equal to one, and it is set equal to zero otherwise. The Haven or Holding Company Dummy is equal to one for firms that, in 2004, either have operations in a tax haven or use a holding company abroad and is otherwise equal to zero. The 2005 Dummy is equal to one in 2005 and zero in other years. The sample in columns 1, 3, and 5 includes poorly governed firms, or firms with values of governance, as measured in Gompers, Ishii, and Metrick (2003), that are equal to or exceed 12. Firms with stronger governance comprise the sample employed in columns 2, 4, and 6. Heteroskedasticity-consistent standard errors that correct for clustering at the firm level appear in parentheses. ** and * denote significance at the 5 and 10 percent levels, respectively.

Dependent Variable:	U.S. Capital Expenditures/ Lagged Assets		CEO Compensation/ Lagged Assets		Payouts/ Lagged Assets	
Governance Subsample:	Weak	Strong	Weak	Strong	Weak	Strong
	(1)	(2)	(3)	(4)	(5)	(6)
Repatriations/Lagged Assets	0.2921 (0.2665)	0.0042 (0.1558)	0.0049 (0.0181)	-0.0001 (0.0222)	-0.0523 (0.4011)	1.0713** (0.5057)
Lagged Leverage	-0.0105 (0.0151)	-0.0519** (0.0103)	-0.0025** (0.0005)	-0.0039** (0.0010)	-0.0544** (0.0228)	-0.0365** (0.0162)
Lagged Tobin's q	0.0012 (0.0017)	0.0027** (0.0010)	0.0007** (0.0002)	0.0003** (0.0001)	0.0053 (0.0033)	0.0050** (0.0024)
Lagged Cash/Lagged Assets	-0.0618* (0.0355)	0.0004 (0.0180)	-0.0026 (0.0019)	0.0020 (0.0027)	0.0537 (0.0375)	0.0719** (0.0223)
Lagged Profitability	0.0425 (0.0265)	0.0246** (0.0106)	-0.0004 (0.0015)	0.0012 (0.0013)	0.0983** (0.0337)	0.0486** (0.0158)
Firm and Year Dummies?	Y	Y	Y	Y	Y	Y
Instrument with Haven or Holding Company Dummy*2005 Dummy and High Tax Costs of Repatriation Dummy*2005 Dummy?	Y	Y	Y	Y	Y	Y
No. of Obs.	1,116	2,867	813	2,094	1,136	2,866