

Examining Investor Expectations Concerning Tax Savings on the Repatriations of Foreign Earnings under the American Jobs Creation Act of 2004

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Abstract

The American Jobs Creation Act of 2004 was signed into law on October 22, 2004. One of the most significant aspects of this legislation is a temporary tax holiday for dividend repatriations from foreign subsidiaries. U.S. multinational corporations may elect during a one-year window to deduct 85 percent of extraordinary cash dividends received from foreign subsidiaries. In this study, we model the impact that this legislation has on a firm's decision to either repatriate or reinvest foreign earnings from abroad. We then examine investors' assessment of how U.S. multinational corporations will respond to the temporary tax holiday. Our results indicate that investors repriced the tax liability consistent with investors anticipating that U.S. multinational corporations will repatriate a significant portion of their permanently reinvested foreign earnings during the tax holiday.

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I. Introduction

On October 22, 2004 the President signed into law the American Jobs Creation Act of 2004 (AJCA 2004). The AJCA 2004 involves numerous changes to the existing tax law, among the most notable being a dividend repatriation tax holiday. U.S. multinational corporations (MNCs) have a one-year window during which they can deduct 85 percent of qualifying dividends repatriated from their foreign subsidiaries. The primary beneficiaries of this dividend repatriation tax holiday are U.S. MNCs with significant foreign earnings that are being taxed at a low foreign rate relative to their U.S. domestic earnings.

Initial research and media reports indicate the impact of this tax holiday on some U.S. MNCs is substantial. Albring, Dzurainin, and Mills (2005) estimate these firms will save \$29 billion from the dividend repatriation tax holiday under the AJCA 2004. In reference to this legislation, the *Wall Street Journal* reported on October 5, 2005 that “nine months into 2005, U.S. companies have announced plans to repatriate about \$206 billion in foreign profits under a special one-year tax break.” Under current U.S. tax law, earnings from foreign subsidiaries are not taxed in the U.S. until a dividend is repatriated back to the U.S. parent.¹ However, to avoid double taxation, firms receive a tax credit for foreign taxes paid, subject to limitations. Thus, in effect, when a firm repatriates income from a low-tax country, it is required to pay only the difference between the U.S. tax rate and the foreign tax rate to the U.S. government.² The temporary tax holiday in the AJCA 2004

¹ Earnings of U.S. owned foreign branches and subpart F earnings (basically earnings arising from passive activities such as investments in financial assets) are subject to U.S. taxation in the period earned.

² We discuss foreign tax credits in more detail below. A firm may use excess foreign tax credits from subsidiaries based in high-tax countries to offset additional U.S. taxes on dividends from low-tax countries.

results in firms being taxed in the U.S. at a maximum effective rate of 5.25% on repatriated foreign earnings as opposed to the top U.S. corporate statutory rate of 35%.³

This study examines investors' assessments of how U.S. MNCs might respond to this tax holiday before the firms actually announce the extent of the foreign earnings they intend to repatriate during the holiday. Specifically, we estimate market valuation and stock return regressions to determine whether investors anticipate that firms with low-taxed offshore earnings will take advantage of this tax holiday and repatriate their foreign earnings at a significantly reduced tax rate. For financial reporting purposes, U.S. MNCs can designate foreign subsidiary earnings as "permanently reinvested" under APB Opinion No. 23. Permanently reinvested earnings (PRE) are earnings from foreign subsidiaries that have been invested abroad and which managers intend to reinvest indefinitely or that managers intend to remit in a tax-free liquidation. Firms with an average foreign tax rate below the statutory U.S. tax rate are able to defer recognizing the residual U.S. tax on their foreign earnings for financial reporting purposes by designating them as permanently reinvested.⁴

Despite this designation, previous research by Collins, Hand, and Shackelford (2001) is consistent with the market capitalizing the deferred repatriation tax liability into current stock prices for foreign earnings that managers have designated as permanently reinvested. This result suggests the market does not find the claim that these foreign earnings are permanently reinvested as credible, and anticipates these firms will

³ Given a top statutory rate of $t_d = 35\%$, the 85% deduction for dividends from foreign earnings results in a maximum effective rate of $5.25\% = (t_d - t_f) \times (1 - 85\%) = (35\% - 0\%) \times (1 - 85\%)$, assuming no foreign tax credits because $t_f = 0$.

⁴ Statement of Financial Accounting Standards No. 109 requires that firms disclose the amount of tax related to permanently reinvested earnings if it is material and if it is "practicable" to determine the liability. Many of the firms in our study do not disclose the extent of the tax liability associated with permanently reinvested earnings, indicating that the determination of such a liability is not practicable.

eventually pay the residual repatriation tax when those earnings are brought home to the U.S. Dhaliwal and Krull (2006) also investigate whether investors incorporate the deferred tax liability on PRE into stock prices. In contrast to Collins et al. (2001), Dhaliwal and Krull (2006) find that after controlling for size the deferred repatriation tax on PRE does not directly affect market value.⁵

We employ a market-value (or price-level) regression model and supplement the analysis with a returns approach, which is less subject to econometric problems.⁶ We examine U.S. MNCs with low-taxed off-shore earnings to assess how the market pricing of this deferred tax liability changes when passage of a temporary tax holiday for dividend repatriations becomes probable. Specifically, we test whether, consistent with Collins et al. (2001), the market capitalizes into current stock prices the unrecognized deferred tax liability associated with PRE generated in low-tax jurisdictions prior to the time when passage of the tax holiday was probable. We then examine the same set of firms after passage of the tax holiday became probable to determine whether there is a significant reduction in the capitalization of the deferred tax liability associated with unrepatriated foreign earnings. Such a reduction is consistent with the market anticipating that the firms will repatriate a significant portion of their permanently reinvested earnings during the window provided by the AJCA 2004.

We begin with a simple model of a firm's decision whether to reinvest foreign earnings abroad or to repatriate earnings to the U.S. (from Scholes, et al. 2005) and

⁵ Note that in addition to using different specifications of the market-value regression model, the Collins et al. (2001) and Dhaliwal and Krull (2006) papers examine very different samples of U.S. MNCs. Collins et al. (2001) examine a set of U.S. MNCs reporting PRE in 1993. The Dhaliwal and Krull (2006) study examine a larger sample of firms reporting PRE, positive foreign assets and foreign sales from 1993 to 1999.

⁶ We also check our results using both the Collins et al. (2001) and Dhaliwal and Krull (2006) model specifications and discuss these results below. Our inferences on the market pricing of the deferred repatriation tax on PRE are the same under both specifications.

extend the model to show how the decision changes with the introduction of the tax holiday under the AJCA 2004. We demonstrate the incentive that the AJCA 2004 provides for firms to repatriate foreign earnings during the tax holiday. Based on this model, we provide a numerical example that illustrates the incentive to repatriate under the window. However, the model also shows that as the firm's investment horizon increases, the incentive to repatriate during the tax holiday is substantially reduced. In addition, while the holiday does raise the foreign rate of return that would be required to forgo repatriation, it is not obvious that some firms in our sample would not have some significant foreign investment opportunities that would provide a rate of return sufficient to make repatriation under the Act unattractive. In short, the decision to repatriate during the holiday is going to be a function of a firm's foreign investment opportunities and investment horizon. That said, the magnitude of the savings and the difficulties associated with bringing the earnings home tax-free make it very likely that repatriation during the holiday will be the most efficient choice for most firms. We test whether, consistent with this incentive, the market anticipates that the majority of U.S. MNCs subject to average foreign tax rates below the U.S. statutory rate will choose to repatriate a significant portion of their PRE during 2005.⁷

On October 27, 2003, *Corporate Financing Week* reported that "proposed legislation allowing companies to bring back earnings held in foreign subsidiaries to the U.S. appears to be gaining momentum in Congress." The article quotes a tax and accounting

⁷ IRC Code Section 965, added as a result of AJCA 2004, allows firms to take a one-time deduction in either 2004 or 2005 (for calendar year firms) of 85% of foreign earnings repatriated to the U.S. parent company through an extraordinary cash dividend. Due to the complexity of the new provision, combined with uncertainty regarding a number of issues related to the 85% dividend, the majority of firms chose to defer the use of the one-time deduction until 2005. We have eliminated from our sample any firms that chose to repatriate earnings under this provision in 2004. Omission of these firms from our analysis allows us to examine investors' assessment of how firm's will respond to the AJCA 2004 before the firms actually announce specifics regarding the amount of PRE they intend to repatriate during the tax holiday.

analyst from Lehman Brothers as indicating the legislation was “gaining momentum very quickly and that passage in the first quarter of 2004 is highly likely.” A review of the Lexis-Nexis Academic research database turned up no articles prior to 2003 referring to similar legislation as having a high probability of passing. For this reason, we focus our tests on examining the change in the extent to which the market capitalizes the residual repatriation tax for the 2003 and 2004 fiscal years. Specifically, we analyze the change in the market’s pricing of the repatriation tax from the 2001 and 2002 fiscal year, before passage of the tax holiday was probable, to the 2003 and 2004 fiscal years at which point passage of the holiday was probable.

The results from our price-level regression tests are consistent with investors anticipating firms will repatriate a significant portion of their PRE during the window provided by the AJCA 2004. Consistent with Collins et al. (2001), we find, that prior to the time when passage of the tax holiday became probable, investors capitalized into current stock prices the unrecognized deferred tax liability associated with unrepatriated foreign earnings designated as permanently reinvested earnings.⁸ However, for the periods after passage of the tax holiday became likely, we find a significant reduction in the extent to which investors capitalize the deferred repatriation tax into current stock prices. The results of our stock return regression tests are consistent with the price-level regressions: The estimated tax savings from the tax holiday are significantly positively

⁸ This result is not consistent with Dhaliwal and Krull (2006) who do not find that PRE or deferred taxes on PRE significantly affect stock prices. However, Dhaliwal and Krull (2006) examine a larger set of sample firms collected from 1993 to 1999. We restrict our analysis to firms identified by Albring et al (2005) as having PRE > \$500 million in 2002. Our sample has an average PRE of \$3,362 million, while the Dhaliwal and Krull (2006) sample has an average PRE of \$401.08 million. We focus on a set of firms with very large PRE that are likely to benefit most from the passage of the AJCA. We believe our analysis of this set of firms is both interesting and economically significant. This difference in sample composition however could explain the differential results regarding the significance of the TAX variable in the two papers.

associated with stock returns in 2003. We also run supplemental price-level tests to examine whether investors price the deferred repatriation tax as a function of a firm's probability of repatriation during the holiday. Our results are consistent with investors cross-sectionally adjusting their pricing as a function of the probability of repatriation.

Our findings are particularly notable because none of the firms in our sample had announced the extent of the PRE they intended to repatriate during the window. Our findings suggests that the market is relatively efficient in incorporating expectations about firms responding to the tax cut on repatriations and that the market expected firms to be responsive to the tax cut. It appears investors were aware of the incentive provided by this tax holiday for firms to repatriate foreign earnings and anticipated that these firms would take full advantage. This indicates a fairly sophisticated understanding on the part of investors of the factors a firm must consider in making the decision on whether to repatriate or reinvest, and of how the AJCA 2004 impacted that decision.⁹

The remainder of the paper proceeds as follows. Section II provides a discussion of the key provisions associated with the dividend repatriation tax holiday. Section III develops a simple model of a firm's decision on whether to repatriate or reinvest foreign earnings from abroad and the impact that AJCA 2004 has on that decision. Section IV details our sample selection and descriptive statistics. Section V presents our research design and findings. Section VI concludes.

⁹ Shane and Stock (2006) investigate the extent to which investors correctly interpret the temporary reported book income effects of tax-motivated income shifting around the Tax Reform Act of 1986. They report evidence consistent with analysts and investors failing to correctly identify and price these temporary effects. This finding would seem to contrast with our finding that investors are relatively sophisticated in examining the impact of the repatriation tax holiday. However, Shane and Stock (2006) examine a setting where managers likely took deliberate care to conceal their earnings management from detection. In contrast, we examine a situation where managers have simply not announced how they will react to a major change in the tax law.

II. Key Provisions of the Repatriation Tax Holiday

Pursuant to IRC Section 965, a provision of the AJCA 2004, firms are eligible for the 85% dividends received deduction (DRD) on cash dividends from controlled foreign corporations (hereafter CFCs) A CFC basically is a foreign subsidiary (i.e., a subsidiary that is located in some foreign country) of a U.S. corporation. However, this dividend is limited to the greater of \$500 million or the amount shown as earnings permanently reinvested outside the U.S. on the firm's financial statements. If the extent of earnings permanently reinvested outside the U.S. is not disclosed, but the tax liability attributable to such earnings is disclosed then the financial statement amount is set equal to this liability divided by 0.35.¹⁰ For firms that file financial statements with the Securities and Exchange Commission (SEC), the applicable financial statement is the most recent audited financial statement filed on or before June 30, 2003. For firms that do not file with the SEC, it is the most recent financial statement, which was certified on or before June 30, 2003.

In addition to the requirements limiting the amount of the dividend eligible for the DRD, the dividend eligible for the benefit must also be extraordinary. Firms that have been receiving dividends from their CFCs will only benefit from the provision to the extent the average of such annual dividends is increased by the dividend repatriated during the tax holiday. A base period amount is calculated as the average dividend received by the firm during three of the previous five taxable years ending before June 30, 2003. If there are less than five taxable years available then the base period includes

¹⁰ As noted by Albring et al. (2005) and Blessing (2004), this approach would significantly understate the amount of permanently reinvested earnings because the deferred tax would be recorded at the incremental tax rate net of any foreign tax credits as opposed to a rate of 35 percent.

all taxable years. Any cash dividend received during the tax holiday that is in excess of the base amount is eligible for the DRD.

Another critical provision of Section 965 stipulates that the DRD is available only to the extent that cash dividends received from a CFC are reinvested in the U.S. Section 965(b)(4) states that permitted investments include: 1) funding of working hiring and training (other than executive compensation), 2) infrastructure, 3) research and development, 4) capital investments, and 5) financial stabilization of the corporation for purposes of job retention or creation. The domestic reinvestment plan adopted by the firm must be approved by the CEO prior to the date the cash dividend is paid and must subsequently receive the approval of the board of directors. Many of the U.S. MNCs examined in this study indicated in their 2004 financial statements that they are awaiting technical guidance related to these reinvestment requirements before they could estimate the amount earnings they intend to repatriate under the tax holiday.¹¹

FASB issued Staff Position 109-2 in December of 2004 to provide disclosure guidance related to the repatriation of foreign earnings under AJCA 2004. Pursuant to FSP 109-2, firms must disclose any planned repatriation, or if they are still in the process of evaluating repatriation under AJCA 2004, they must disclose the range of amounts being considered. The majority of the firms in our sample disclosed a broad range for the potential amount of PRE that they were considering repatriating during the tax holiday. The disclosed range often began with zero, giving investors little specific guidance on the extent to which the company intended to take advantage of the tax holiday. For example,

¹¹ Based on analysis of investment alternatives implied by the firms' decision to accumulate foreign earnings overseas, Blouin and Krull (2006) predict that firms will actually use any repatriated funds under AJCA 2004 to repurchase shares. They provide evidence consistent with their predictions.

Agilent Technologies, Inc. made the following disclosure related to AJCA (2004) in the tax footnote of their 2004 Form 10-K:

On October 22, 2004, the AJCA was signed into law. The AJCA includes a deduction for 85 percent of certain foreign earnings that are repatriated, as defined in the AJCA, at an effective tax cost of 5.25 percent on any such repatriated foreign earnings. Agilent may elect to apply this provision to qualifying earnings repatriations in fiscal 2005. Agilent has begun an evaluation of the effects of the repatriation provision; however, we do not expect to be able to complete this evaluation until after Congress or the Treasury Department provide additional clarifying language on key elements of the provision. We expect to complete our evaluation of the effects of the repatriation provision within a reasonable period of time following the publication of the additional clarifying language. The range of possible amounts that Agilent is considering for repatriation under this provision is between zero and \$970 million. The related potential range of income tax is between zero and \$51 million.

We assume that any change in the extent that the market capitalizes the deferred tax on unrepatriated foreign earnings is driven exclusively by the repatriation tax holiday and not by other provisions in the AJCA 2004. However, the AJCA 2004 contained two other major provisions that might impact our tests. One of these provisions was a reduction in the number of income “baskets” used to calculate a firm’s foreign tax credit limitation. This change allows firms more flexibility in shielding income earned in low-tax jurisdictions from the repatriation tax. There are, however, some key differences between the repatriation tax holiday and the change in the calculation of the foreign tax credit limitation. The reduction in the number of baskets will make it easier for firms to shield earnings in low-tax countries from the repatriation tax using earnings from high-tax countries. For purposes of our study, we calculate our estimate of the repatriation tax using an average foreign tax rate. Only firms with an average foreign tax-rate below the U.S. statutory rate have a positive repatriation tax liability in our analysis. It seems unlikely that these firms would have sufficient earnings from high-tax countries to

significantly offset their foreign earnings from low-tax countries, or their average foreign tax rate would not be below the U.S. statutory rate. This observation does not rule out a possible benefit for these firms associated with the reduction in baskets; however this benefit is likely to be relatively small in comparison to the benefit provided by the repatriation tax holiday.

The AJCA 2004 also includes a provision for a domestic manufacturing deduction (DMD) that allows manufacturing firms to deduct 3% (which increases to 6% in 2007 and 9% in 2010) of qualified production income (subject to limitations). The DMD will increase the domestic after-tax rate of return, r_d , starting in 2005 (assuming input prices are not bid up too much such that after-tax rates of return to manufacturing are unchanged). With an expected increase in r_d , firms will be encouraged to repatriate during the tax holiday and this reinforces our prediction that investors will view the tax holiday positively.

In an effort to control for the possible impact of the DMD provision we directly test whether, in a price-level regression, the multiplier on domestic net income changed after passage of the AJCA became probable. The results (not tabulated) are not consistent with the market increasing the multiplier on domestic income as a result of the DMD provision. In fact, we actually see a decline in the market's pricing of domestic net income during the AJCA period. We are uncertain as to what is driving this decline; however our inferences related to the pricing of the deferred repatriation tax remain unchanged.

III. The Decision to Repatriate or Reinvest Foreign Earnings

In choosing whether to repatriate foreign earnings U.S. MNC's must consider the taxes that would be paid if the earnings were repatriated currently, future taxes that would be paid on the earnings if repatriation is deferred, and any implicit taxes that would be paid by choosing a tax-favored option that has a lower pretax rate of return. The U.S. government taxes U.S. firms on their worldwide income, however foreign subsidiaries of U.S. MNC's are not included on the consolidated U.S. tax return. The earnings from these foreign subsidiaries are not taxed until the cash is repatriated to the U.S. parent. When the earnings are repatriated they are taxed at the U.S. statutory rate and the firm receives a credit for foreign taxes paid. In choosing to reinvest foreign earnings abroad, a firm avoids paying the residual U.S. tax, until the foreign earnings are repatriated to the U.S.

The following set of equations, adapted from Hartman (1985) and Scholes et al. (2005), models the decision a firm faces to repatriate or reinvest.¹² In the equations below, t_d is the U.S. tax rate, t_f represents the foreign tax rate, r_d is the U.S. after-tax rate of return, and r_f represents the foreign after-tax rate of return.¹³

¹² DeWaegeaere and Sansing (DS 2006) develop a more complex model than the model presented here. Our model assumes a finite-lived subsidiary with eventual repatriation of foreign earnings, whereas DS assume foreign subsidiaries investment in operating assets are infinite lived allowing for the possibility of permanent deferral of repatriation tax on the earnings of its operating assets. Additionally DS separate out investments in operating assets and financial assets and among growth firms (the assumption in our model) and mature firms where ($r_d = r_f$) and any foreign reinvestment is in financial assets. While such separation allows analytical insights into firms' repatriation decisions and on possible coefficient values on deferred tax liabilities and permanently reinvested earnings arising from operating assets and financial assets, data on PRE and DTL decomposed by asset type are simply not disclosed nor available. Thus we use our simpler model to make our point.

¹³ Consistent with existing U.S. tax law, this model assumes the home-country has a worldwide tax system with foreign tax credits rather than a territorial system. This model also assumes the home-country tax rate, t_d , exceeds the foreign-country tax rate, t_f . Otherwise, no home-country tax would be due upon repatriation.

Letting DIV represent the amount of dividends that are repatriated in the current period, the amount remaining after paying the home country tax, in this case the U.S. tax, is

$$DIV - \frac{DIV}{1-t_f}(t_d - t_f) = \frac{DIV(1-t_d)}{1-t_f} \quad (1)$$

The second term on the left hand side of equation (1) denotes the calculation of additional US taxes. DIV is grossed up by $(1 - t_f)$ to derive an estimate of foreign taxable income which is then multiplied by the U.S. tax rate (to estimate U.S. taxes) less the amount of the foreign tax credit (foreign taxable income times t_f representing the foreign taxes paid on the foreign income).¹⁴ If the firm then chooses to reinvest this amount in the U.S. for n periods at an after-tax rate of return of r_d , the accumulation in n periods is

$$\frac{DIV(1-t_d)}{(1-t_f)}(1+r_d)^n \quad (2)$$

However, if the firm instead chooses to reinvest the earnings and profits abroad for n periods and then repatriate, the accumulation in n periods is

$$DIV(1+r_f)^n - \frac{DIV(1+r_f)^n}{1-t_f}(t_d - t_f) = \frac{DIV(1-t_d)}{1-t_f}(1+r_f)^n \quad (3)$$

In comparing equations (2) and (3), the only difference is in the last term $(1 + r_d)^n$ vs. $(1 + r_f)^n$. As a result, the decision to reinvest hinges on whether the after-tax rate of return on foreign investment, r_f , exceeds the after-tax rate of return on home country investment, r_d . Interestingly, the decision to repatriate is not impacted by the extent of the repatriation tax or the investment horizon, because the firm bears the cost of the repatriation tax irrespective of whether it chooses to repatriate now or to reinvest and repatriate at some

¹⁴ $DIV / (1 - t_f)$ is equal to foreign source income (FSI), and the foreign tax credit (FTC) is limited to the $\min(FSI \times t_d, FSI \times t_f)$.

point in the future.¹⁵ If a firm did not repatriate foreign earnings before the AJCA 2004 then we can infer that $r_d < r_f$.

The results of the above model rely on two critical assumptions. The first assumption is that the foreign earnings will eventually be repatriated and subject to the tax on repatriation. This assumption appears to be supported by the work of Collins et al. (2001), who find the market capitalizes into stock prices the unrecognized deferred tax liability associated with unrepatriated foreign earnings despite management's designation of the earnings as permanently reinvested. However, Scholes et al. (2005) discuss a number of ways that foreign earnings might be brought home tax free. But note that the sample firms have already reported these earnings as taxable income in the foreign jurisdiction so it is not possible to employ the usual mechanisms (transfer pricing, interest payments to the U.S. parent on debt, royalties and other payments to the U.S. parent for services provided) because these mechanisms affect future profits, not past reported profits. Thus the ability to avoid U.S. taxation on already reported foreign earnings is somewhat limited. Further, these mechanisms to transfer future profits usually relate to firms wishing to transfer profits from high tax jurisdictions to low tax jurisdictions whereas in our setting the U.S. tax rate is higher than the foreign tax rate (otherwise there would not be any additional U.S. tax due on repatriation).

The second assumption is that our model also assumes that the tax price of repatriation remains constant over time. The introduction of the AJCA 2004 obviously violates this assumption. The AJCA 2004 allows MNCs to repatriate at a significantly

¹⁵ The model is obviously a simplification. For example, by designating foreign earnings as PRE, firms do not have to accrue or recognize the additional U.S. taxes due on repatriation. Thus managers can "manage" reported after-tax earnings by increasing or decreasing the amount designated as PRE. Krull (2004) provides evidence that firms appear to manage reported earnings via PRE. The value to the firm (or at least the managers) is not captured in our model.

reduced rate of a maximum 5.25 percent because 85% of the dividend is excluded from additional U.S. taxation. As a result, the tax price of dividend repatriation now impacts the final result, and firms face the following decision:

If the firm decides to repatriate under the AJCA 2004, the amount remaining after paying the home-country, U.S., tax is

$$DIV - (15\% * \frac{DIV}{1-t_f}(t_d - t_f)) \quad (4)$$

If the firm then chooses to reinvest the amount repatriated during the tax holiday in the U.S. for n periods at an after-tax rate of return of r_d , the accumulation in n periods is

$$\left[DIV - (15\% * \frac{DIV}{1-t_f}(t_d - t_f)) \right] (1+r_d)^n \quad (5)$$

Under the AJCA 2004, the firms must now compare equation (5) to equation (3) to determine whether or not to repatriate under the tax holiday. The firm will choose to repatriate under AJCA if equation (5) \geq equation (3):

$$\left[DIV - (15\% * \frac{DIV}{1-t_f}(t_d - t_f)) \right] (1+r_d)^n \geq \frac{DIV(1-t_d)}{1-t_f} (1+r_f)^n \quad (6)$$

The decision is now a function of the current repatriation tax under the AJCA 2004, the future expected U.S. tax rate, the expected after-tax rates of return on both foreign and domestic investments, and the length of the investment horizon. In our original analysis, without the tax holiday provided by the AJCA 2004, a firm would choose to continue to reinvest foreign earnings and profits abroad if r_f exceeded r_d .

A simple numerical example demonstrates the impact the AJCA 2004 has on this decision and the incentive a firm has to repatriate during the tax holiday. Suppose a firm has foreign retained earnings (PRE) = \$100 and the firm has a 10-year investment

horizon. Further, assume the firm has investment opportunities abroad such that its foreign pre-tax rate of return (R_f) is 10%, and assuming a 15% foreign tax rate, the firm's foreign after-tax rate of return (r_f) is 8.5%. In addition, assume the firm faces a domestic U.S. tax rate of 35%. Under this scenario, before the tax holiday provided by the AJCA 2004, the firm would have had to earn a pre-tax rate of return on earnings repatriated and reinvested domestically of at least 13.08% to justify repatriation calculated as follows:

$$(1 + r_d)^{10} < (1 + 0.085)^{10} \rightarrow r_d > 0.085 \rightarrow R_d > 0.13077$$

However, during the tax holiday, a firm facing the same scenario would have to earn a pre-tax domestic rate of return of only 9.24% to justify repatriating under the window provided by the tax holiday. This required rate of return on repatriated earnings is calculated from the inequality in equation (6) as follows:

$$\left[100 - (15\% * \frac{100}{1-0.15} (0.35 - 0.15)) \right] (1 + r_d)^{10} \leq \frac{100(1-0.35)}{1-0.15} (1 + 0.085)^{10}$$

$$r_d > 0.06008 \rightarrow R_d > 0.09243$$

The above example illustrates the incentive provided by the tax holiday for firms to repatriate low-tax foreign earnings.¹⁶ Notice that before the tax holiday the firm was indifferent between repatriating and reinvesting abroad when the after-tax domestic rate of return equaled the after-tax foreign rate of return. However, during the tax holiday the firm requires a 2.5% (6.0% - 8.5%) higher after-tax rate of return abroad than at home in order to justify not taking advantage of the tax holiday. This example helps to illustrate the importance that the spread between domestic and foreign rates of return plays in

¹⁶ Note that as the investment horizon increases, the tax incentive to repatriating under AJCA 2004 is reduced. For example, if the firm's foreign investment horizon is 25 years, then the required domestic pretax rate of return for repatriation to be tax-favored over reinvestment abroad is 11.53%, holding all other factors in the above example constant. Blouin and Krull (2006) note that as the investment horizon approaches infinity reinvestment only depends on the relation between r_d and r_f and the tax holiday becomes irrelevant.

determining the extent to which a firm benefits from the tax holiday. It is evident that firms with after-tax foreign investment opportunities that far exceed their domestic investment opportunities will not find it beneficial to repatriate even during the tax holiday, and will continue to invest abroad. In the next section, we describe our methodology for testing the extent to which the market anticipated that firms would take advantage of the tax holiday and repatriate a significant portion of their PRE during the window provided by the AJCA 2004.

IV. Sample Selection

Table 1, Panel A presents our sample selection procedure. Our sample is based on a set of 117 firms identified by Albring et al. (2005) as having permanently reinvested earnings exceeding \$500 million in 2002.¹⁷ Our tests utilize firm-specific data for the 2001, 2002, 2003, and 2004 fiscal years. As a result, we begin with 468 firm-year observations (117 firms times 4 years). To obtain PRE for each firm-year observation, we search each firm's tax footnote in the 10K. There were 41 firm-year observations that did not disclose the magnitude of their PRE in their 10K, and 115 did not have sufficient data to calculate the variables necessary for our analysis. This latter result is due primarily to our use of a multi-year measure of the foreign tax rate. We estimate a firm's foreign tax rate as the sum of foreign current tax expense from year t-4 through year t divided by the sum of foreign pre-tax income from year t-4 through year t.¹⁸ These data requirements

¹⁷ Albring et al. (2005) construct their sample by identifying firms on the Compustat Geographical Segment database with foreign assets or foreign sales. They then analyze the footnotes of the 2002 annual reports for these firms to identify those firms that disclose a dollar amount of PRE exceeding \$500 million.

¹⁸ Consistent with Albring et al. (2005), we use a multi-year measure of foreign tax rate because the computation of deemed paid tax under IRC Section 902(a) attaches to each dividend the amount of post-1986 foreign income taxes its foreign subsidiary pays in proportion to the percentage of the subsidiary's post-1986 earnings and profits it receives. Using a five-year accumulation period is a compromise between using data from the most recent year to calculate the foreign ETR and using data on all taxes and earnings since 1986 which would result in significant survivorship bias.

leave us with a sample of 312 distinct firm-year observations from 92 firms for our analysis.

Table 1, Panel B presents a distribution of firm-year observations used in our tests by industry. Of the total sample of 312 observations, 242 firm-years are classified as manufacturing. Of the firm-years classified as manufacturing, the highest industry concentrations are: 23 firm-years in the pharmaceutical industry (SIC code 2833-2836), and 19 firm-years in the computer or computer-related industries (SIC code 7370-7377).

Table 2, Panels A and B provide descriptive statistics for our sample of firms. Total assets for our firms range from \$1.2 billion to \$799 billion, with a mean (median) value of \$42.2 (\$13.3) billion. The market values of our sample firms range from \$248 million to \$382 billion, with a mean (median) market value of \$38.0 (\$14.6) billion. For all firms on Compustat during the same time period, the mean (median) total assets are \$7.0 (\$0.249) billion and mean (median) market value of equity is \$2.7 (\$0.161) billion (numbers not tabulated). Thus while the number of firm-year observations in our sample is relatively small, these firms are extremely large relative to the average publicly traded firm in the U.S. economy, and these firms are economically significant in their own right. The remaining variables in Table 2 relate to our test variables and we discuss them after we present our test procedures.

V. Research Design and Results

Price-level tests:

Our first set of tests use a price-level model:¹⁹

¹⁹ Whether US taxes on foreign earnings are capitalized into stock prices is somewhat analogous to whether shareholder-level taxes on dividends are capitalized. Harris and Kemsley (1999) employ a price-level model predict and test whether investors capitalize taxes on dividends at the top individual shareholder rate. However, Hanlon, Myers and Shevlin (2003) and Dhaliwal, Erickson, Frank and Banyi (2003) question the

$$MVE_i = \beta_0 + \beta_1 DNI_i + \beta_2 FNI_i + \beta_3 CS_i + \beta_4 RE_i + \beta_5 PRE_i + \beta_6 TAX_i + \beta_7 D_AJCA_i + \beta_8 (D_AJCA_i \times TAX_i) + \varepsilon_i \quad (7)$$

where all variables (except SIZE and the dummy variable) are scaled by total assets (data 6) at fiscal year-end.²⁰

MVE = market value of common equity, calculated as common stock outstanding (data 25) multiplied by the market price of stock three months after the fiscal year-end,

DNI = after-tax financial statement domestic income, calculated as total pre-tax net income (data 237) minus foreign net income (FNI),

FNI = after-tax financial statement foreign income, computed as foreign pretax income (data 273) minus foreign income taxes (data 64),

CS = total common equity less total retained earnings, calculated as total common equity (data 60) minus total retained earnings (data 36),

RE = total retained earnings less PRE, calculated as total retained earnings (data 36) minus PRE,

PRE = permanently reinvested foreign earnings (hand collected from firms' 10Ks), and

Harris and Kemsley result on two grounds. First, both papers raise doubt about whether all retained earnings will be subject to taxation at individuals' tax rates because of the existence of dividend clienteles (dividends attract lower-tax rate investors including institutions who in most cases are tax-exempt), earnings can be and are distributed via share repurchases where the gains to shareholders are taxed at lower capital gains rates (when capital gains were taxed at lower rates than corporate dividends), and in liquidations distributions are taxed at capital gains rates, not as ordinary dividends (even though financial economists refer to these distributions as liquidating dividends). Second, both papers argue that the price-level approach used by Harris and Kemsley (interacting BV and NI with RE/BVE) is non-diagnostic with respect to whether shareholder-level tax on retained earnings is capitalized. Our price-level differs from that used in Harris and Kemsley and is not subject to the same criticisms. We discussed earlier the possibility of firms repatriating foreign earnings without paying any additional U.S. tax. To the extent firms can, and the market understands and anticipates this behavior, the market will assign a lower coefficient (i.e., closer to zero) to our estimates of the additional U.S. tax.

²⁰ Consistent with Collins et al. (2001) we also estimated the above regression scaling the variables by the number of shares outstanding. The results (not tabulated) are generally consistent with those reported in Table 3 where the variables are scaled by total assets.

TAX = unrecognized deferred tax liability associated with PRE if positive (otherwise zero). We calculate TAX as PRE (equation 9 below), grossed up to a pretax amount by dividing by one minus the average foreign tax rate, times the difference between the U.S. statutory rate of 35% and the average foreign tax rate over the previous five years.²¹ For firms with an average foreign tax rate above the U.S. statutory rate, we set TAX to zero.²²

D_AJCA = a binary variable set equal to one for fiscal 2003 and 2004 firm-year observations, and set equal to zero for fiscal 2001 and 2002 firm-year observations.

To allow for cross-sectional aggregation all variables are scaled by total assets at fiscal year-end. Consistent with Collins et al. (2001), we decompose net book value (shareholders' equity) into common stock (CS), retained earnings less permanently reinvested earnings (RE – PRE), and PRE components and include the estimated unrecognized tax liability, TAX, to examine its market valuation separately. Also consistent with Collins et al. (2001), we decompose after-tax net income into domestic and foreign components in an effort to control for possible valuation differences between

²¹ The average foreign tax rate is calculated as the sum of foreign income tax (data 64) from year t-4 to t divided by the sum of foreign pretax income (data 273) from year t-4 to t. We replicated our tests using a measure of the average foreign tax rate based on one year of foreign income. This change results in an increase in sample size and the results (not tabulated) are consistent with those reported using a five-year measure.

²² Note that we calculate the TAX variable based on PRE at the end of each year. However, the amount a firm can repatriate under the tax holiday is limited to the PRE reported on the last audited financial statement filed on or before June 30, 2003. We use this specification because adjusting our calculation of the TAX variable to be based on PRE at the end of fiscal year 2002 during the AJCA period would necessitate adding several additional variables to the price-level regression to reflect the change in PRE and TAX from 2002 to 2003 and 2004 respectively. We believe the addition of these variables would add unnecessary complexity to our model and would have limited impact on our inferences regarding the markets pricing of the deferred repatriation tax pre/post AJCA 2004. If PRE is increasing over time, then any increase in PRE in 2003 and 2004 is not eligible for the holiday.

the two components. Dhaliwal and Krull (2006) include a size variable, calculated as the log of the market value of equity, in their regression. We check our results including log of market value below.

The TAX variable is calculated based on the difference between the U.S. statutory rate and the average foreign tax rate. This calculation of the tax liability assumes firms will repatriate their PRE outside of the window provided by the AJCA 2004, and will be subject to the full residual repatriation tax as follows:

We gross up the expected dividend to the pretax amount:

$$\text{Pretax Dividend} = \text{PRE} / (1 - t_f) \quad (8)$$

and we estimate the incremental U.S. tax as:

$$\text{Incremental Repatriation Tax} = \text{Pretax Dividend} * (35\% - t_f). \quad (9)$$

If a firm chooses to repatriate during the tax holiday provided by the AJCA 2004, then the incremental U.S. tax would be calculated as follows:

$$\text{Incremental Repatriation Tax} = 15\% * \text{Pretax Dividend} (35\% - t_f). \quad (10)$$

From equation (10), it is apparent that the decision to repatriate during the tax holiday results in an 85% reduction in the residual tax on repatriation.

To test the change in the extent to which the market prices the deferred tax on repatriation, we include a dummy variable, D_AJCA , set to one for 2003 and 2004 firm-year observations, and set to zero for 2001 and 2002 firm-year observations. As discussed above, passage of the tax holiday became probable during 2003, and the Act was officially signed into law during 2004. We interact D_AJCA with TAX and as a result, the coefficient on TAX, β_6 , in equation (7) captures the extent that the market capitalizes the (unrecognized) deferred incremental U.S. tax on unrepatriated foreign earnings into

current stock prices prior to the time when passage of the tax holiday became probable. Thus, β_6 is predicted to be negative because TAX is a liability to the firm. However, we do not predict or specify an exact magnitude of the coefficient on TAX in this model (such as -1) because our regression model is loosely based on the valuation model presented by Ohlson (1995) in which price is regressed on net book value (CS, RE, PRE and TAX in our setting) and net income (DNI and FNI in our setting). Ohlson shows that the weight on the book value (net income) components are decreasing (increasing) in the persistence of earnings. In the extreme, if earnings are highly persistent (transitory) the book value of equity components will receive low (high) weights in the regression.

In our analysis we calculate the incremental repatriation TAX in both periods using equation (9). The coefficient on $(D_AJCA \times TAX)$, β_8 , thus estimates the change in the extent to which the market capitalizes the deferred tax on unrepatriated earnings into current stock prices after passage of the tax holiday became probable. If the market expects firms to repatriate at the lower tax rate, then β_8 is predicted to be > 0 , because we estimated TAX using equation (9) which assumes the market does NOT anticipate repatriation under the AJCA.²³ In the relatively extreme circumstance that the market anticipated that firms would repatriate all of their PRE during the tax holiday, then we

²³ An econometrically equivalent approach would be to estimate TAX during the AJCA period using equation (10) and use this estimate in regression equation (7). The weights on TAX are predicted to be the same in both periods because TAX is estimated to reflect the taxes due if repatriated in that period. The prediction would then be $\beta_8 = 0$, no difference in the weights. Such a result could be observed due to low power (which could be a problem for us because of the relatively small sample sizes). To avoid this dual interpretation problem, we use the approach outlined in the text. The approach we adopt is intuitively more appealing as we predict the market anticipates a decline in the estimated taxes which will manifest as a smaller coefficient on the TAX variable after AJCA: $\beta_8 > 0$.

should see an 85% reduction in the extent to which TAX is capitalized into current stock prices.²⁴

Even if the market anticipated that all of the sample firms would repatriate all of their respective PRE, we would still expect the combined coefficients ($\beta_6 + \beta_8$) to be negative because the firms would still be subject to some residual tax upon repatriation. If the market does not anticipate that firms will repatriate a significant portion of their PRE under the tax holiday, then we would expect β_8 to be insignificant consistent with the market continuing to capitalize the full amount of incremental U.S. taxes that will be due upon repatriation outside of the window provided by the tax holiday.

Table 2, Panel B presents descriptive statistics on the above variables. Median after-tax domestic and foreign net incomes are \$213 million and \$333 million, respectively. The median PRE (permanently reinvested foreign earnings) is \$1,604 million and the median proportion of PRE to total retained earnings is 52 percent. Thus foreign operations and profits are extremely important to our sample firms. The mean (median) estimated foreign tax rate is 31% (29%) but ranges from 4% up to 99%. We set TAX equal to 0 for the 93 firm-year observations for which the foreign tax rate exceeds the U.S. tax rate of 35%. The mean (median) estimated incremental U.S. tax due on repatriation is \$375 (\$99) million. Descriptive statistics for the deflated (by total assets) variables used in the price-level regression are shown in Panel B of Table 2. The mean market value of common stock scaled by total assets (MVE) for our sample is 1.55. The means and medians for each variable are relatively close and there are no obvious outliers. Nevertheless we replicated all results reported below winsorizing the variables

²⁴ Recall, only extraordinary dividends (dividends in excess of an average level over the recent past) were eligible for reduced taxation under the tax holiday. To the extent that less than the entire PRE is eligible, there will be less than an 85% reduction in the pricing of TAX.

at the 1 and 99 percentiles with no change in results or inferences to those tabulated using the unwinsorized data.

Table 2, Panel C reports Pearson and Spearman correlations between the variables used in our price-level regression analysis. The Pearson (Spearman) correlations between after-tax domestic net income (DNI) and market value of common equity (MVE) and between after-tax foreign net income (FNI) and MVE are 0.55 (0.36) and 0.14 (0.21), respectively. The Pearson (Spearman) correlations between retained earnings (less PRE, RE) and MVE and SIZE and MVE are 0.21 (0.21) and 0.25 (0.26), respectively. Somewhat surprisingly, the Pearson (Spearman) correlations between common equity (less retained earnings, CS) and MVE are -0.26 (-0.37). Of the variables used in our analysis only PRE and the unrecognized tax liability associated with PRE (TAX) are not significantly correlated with MVE.

The results of estimating equation (7) without the SIZE variable are presented in column (1) of Table 3.²⁵ The coefficient on FNI, the foreign earnings multiple, is 18.55 and significantly greater than the coefficient on DNI, the domestic earnings multiple, of 10.14 at the ($p < 0.05$) level. This result is consistent with the findings of both Bodnar and Weintrop (1997) and Collins, Kemsley, and Lang (1998) who document a greater capitalization of foreign earnings relative to domestic earnings.²⁶ However, the coefficient on PRE of 2.66 is not significantly greater than the coefficient on RE of 2.42.

²⁵ We present results pooling observations across time. Because we have only 4 years of data, we cannot employ the usual methods to mitigate concerns with cross-sectional correlation (estimating standard errors clustered by time or using annual cross-sections to estimate standard errors, although we note these approaches assume time-series independence which likely is violated in price-level models). Thus we note and caution the reader about the interpretation of the t-statistics given the possibility of cross-sectional correlation in the data. This problem and caution also applies to our returns tests below.

²⁶ Bodner and Weintrop (1997) attribute this difference in valuations to differences in growth opportunities for foreign operations. Additionally, eliminating firm-years observations with negative domestic or foreign

The coefficient on TAX is -5.11, which is significant (at $p < 0.05$) using a one-tailed test. This result is consistent with the market capitalizing the deferred repatriation tax into current stock prices before passage of the tax holiday was probable. While this estimated coefficient might seem large, it is consistent with the finding of Collins et al. (2001) who document a large negative coefficient on the TAX variable.²⁷ They argue the TAX variable represents the deferred tax liability associated with both current and prior foreign earnings that have been designated as PRE, and therefore it reflects some combination of the earnings multiples in the PRE and FNI coefficients. Given these multiples reflect expected future profits, TAX is then picking up the earnings multiples arising from expected future profits. If TAX is reflecting the multiple on future earnings (and not just the U.S. tax liability on past foreign earnings), the estimated coefficient on FNI should decline if we exclude TAX from the regression model. The results of this regression are reported in column (2) of Table 3 and consistent with this prediction we observe that the estimated coefficient declines from 18.55 to 17.54. We also present returns analysis in the next section to help alleviate concerns with the estimated magnitude of the TAX coefficient in the price-level regression approach.

The coefficient, β_8 , on the interaction term ($D_AJCA \times TAX$) is 4.29 and is significant at the ($p < 0.10$) level. This result provides evidence consistent with a shift in the extent to which the market capitalizes the deferred repatriation tax into current stock prices after passage of the tax holiday became probable. As predicted, the combined

earnings while increasing the magnitude of the estimated coefficients on the two net income variables does not change inferences.

²⁷ Collins et al. (2001) express all variables on a per share basis, exclude the size variable and use a sample from 1993. When we estimate equation (7) with variables expressed on a per share basis (and omitting the size variable) our estimated coefficient on the TAX variable is -3.64 very similar to the -3.19 reported by Collins et al.

coefficient on $(\beta_6 + \beta_8)$, -0.82 , is still negative, but is not significant. A negative coefficient on $(\beta_6 + \beta_8)$ would be consistent with the fact that firms are still subject to some repatriation tax even if they choose to repatriate all of their PRE during the window provided by the AJCA 2004.²⁸ Note that the coefficient on the indicator variable, D_AJCA , is negative and significant. We have no specific prediction for the coefficient on the D_AJCA variable and we offer no explanation for why the variable is negatively associated with market value.

As previously noted, Dhaliwal and Krull (2006) report an insignificant coefficient on their TAX variable. One difference between their model and ours is that they add the log of the market value of equity (SIZE) as an additional explanatory variable.²⁹ Column (3) of Table 3 presents the results of estimating the equation (7) with the SIZE variable. The coefficient on the SIZE variable is positive and significant. The results in Column (3) with the inclusion of the SIZE variable are generally consistent with those reported in Column (1) with the TAX and $(D_AJCA \times TAX)$ variables remaining significant and in the predicted directions. Thus the difference in the results between us and Dhaliwal and Krull (2006), in the pricing of PRE prior to AJCA 2004, is not due to our omission of SIZE.

²⁸ Equation (10) shows an 85% reduction in incremental U.S. tax during the holiday. If our estimates reflect investors' estimates without (too much) error we might expect to observe an 85% reduction in the estimated coefficient on TAX. Given an estimated coefficient on TAX in the pre-period of -5.11 we might expect the coefficient on the interaction term $(D_AJCA \times TAX)$ to be 4.34 resulting in $(\beta_6 + \beta_8) = -0.767$ ($.15 * -5.11$). An F test indicates that the observed estimate of the sum of -0.82 is not significantly different from -0.767 .

²⁹ However, it is not clear to us why Dhaliwal and Krull (2006) include the log of MVE as an additional explanatory variable in their model. First, the dependent variable is MVE. Second, all variables are deflated by Total Assets which acts as a control for size. Thus we see no theoretical reason to include the log of MVE and are not surprised it exhibits a significant positive coefficient given the variable is simply a transformation of the LHS dependent variable.

We also estimate equation (7) including 2005 fiscal-year observations with the results reported in Column (4) of Table 3. Examining the market's pricing of the deferred tax on the unrepatriated foreign earnings in 2005 allows us to check whether our finding that the market changed its pricing of the deferred repatriation tax when passage of the AJCA 2004 became probable is in-fact a result of the tax holiday and not indicative of an unrelated downward shift in the markets pricing of this deferred tax.

After the close of the tax holiday, we do not expect the coefficient on the TAX variable for 2005 fiscal-year observations to be significantly different from observations in 2001 and 2002 prior to the introduction of the holiday.³⁰ To test this, we include a new dummy variable (D_2005) which is set to 1 for all 2005 fiscal-year observations and is set to 0 for all other observations. We then interact this dummy variable with the TAX variable ($D_{2005} \times TAX$) to test whether there was a change in the extent to which the market capitalized the deferred repatriation tax on unrepatriated foreign earnings for 2005 fiscal-year observations relative to pre-AJCA. For 2005 fiscal-year observations the TAX variable is calculated based on PRE that was not repatriated during the window provided by the AJCA 2004. As predicted, we find the coefficient on the ($D_{2005} \times TAX$) variable is not significant, implying no difference in the pricing of the deferred tax pre-AJCA and post-holiday, and the combined coefficient on the variables TAX and ($D_{2005} \times TAX$) remains negative and marginally significant at the ($p < 0.15$) level.

Supplemental Price-Level Tests

Our model indicates not all firms might repatriate under the tax holiday: specifically those firms with far more profitable foreign opportunities than domestic opportunities (r_f

³⁰ If investors anticipate that the U.S. Congress will pass subsequent tax holidays related to the repatriation tax they might not capitalize the full amount of the deferred tax on unrepatriated foreign earnings. If this is the case, then we would expect the coefficient on ($D_{2005} \times TAX$) to be positive.

>> r_d). Thus we conduct three sensitivity analyses examining whether the estimated pricing of TAX during the tax holiday varies as a function of proxies for the probability of repatriation. The first proxy is the spread between estimates of each firm's domestic and foreign Return on Assets (ROA Spread). The second proxy is the firm's actual repatriation amount during the tax holiday (Repatriation Percentage). The third proxy for probability of repatriation is based on Blouin and Krull's (2006) analysis and uses the firm's aggregate ROA

ROA Spread

To calculate a domestic and foreign ROA requires data on income and assets for each location. However, only 18.7% of our sample firms disclose foreign assets. ROA can be decomposed as $ROA = NI/TA = NI/Sales \times Sales/TA$ (ROA = profit margin times asset turnover ratio). We have domestic and foreign sales and net income for our sample firms and thus can calculate a profit margin for each location. If we make the assumption that the asset turnover ratio is approximately the same for domestic and foreign operations, we can convert the profit margin to an ROA measure for domestic and foreign operations using the firm's aggregate asset turnover ratio.³¹ Descriptive statistics are reported in panel A of Table 4. Because our sample firms report PRE indicating reinvestment abroad, we expect the foreign profit margin and ROA (a proxy for r_f) to exceed the domestic profit margin and ROA (a proxy for r_d). Consistent with this expectation, the mean and median foreign profit margin exceeds the domestic profit margin (and using the firms aggregate asset turnover) these relations are maintained in

³¹ For the 54 firm-year observations that we could collect data on foreign assets, the correlation between the domestic and foreign asset turnover ratio is 0.32 and significant but is less than unity suggesting there is some measurement error in our calculation. Converting the ROA spread to a dummy variable helps reduce concern with measurement error.

the ROA comparisons. We define a dummy variable DSPREAD set equal to 1 for firm-year observations with a spread between foreign and domestic return on assets in the bottom three quartiles of the sample, and set to zero for all other observations. DSPREAD = 1 firms are those firms most likely to repatriate during the holiday and thus TAX for these firms is likely to be less negatively priced thus exhibiting a positive coefficient relative to the pre-AJCA period and compared to the highest DSPREAD quartile firms predicted to be less likely to repatriate - their estimated coefficient should be positive but much closer to zero. This analysis is only relevant for the AJCA period because in the pre-period, these firms have already designated some foreign earnings as PRE (indicating $r_d < r_f$) thus we interact DSPREAD with TAX only in the AJCA period. Results are reported in column (1) of Table 4: As predicted, TAX in the pre-AJCA period is significantly negatively priced, the highest quartile firms ($D_AJCA \times TAX$) have an estimated coefficient of 1.40 but it is not significantly different than zero, and the estimated coefficient on $D_AJCA \times TAX \times DSPREAD$ is positive and significant at the ($p \leq 0.10$) level. This result indicates that investors lowered the price on TAX in the AJCA period for the DSPREAD = 1 firms: those most likely to repatriate under the holiday.

Repatriation Percentage

Our second sensitivity analysis uses the actual repatriation during the AJCA period as a proxy for ex ante market expectations. If we assume market participants had rational expectations, (or perfect foresight) we can use the actual firm repatriations to test for differences in pricing on the TAX variable during the AJCA period. We are able to collect this data item for 57 of our sample firms (for the remaining firms it is hard to get the exact

number from their footnotes). Panel A of Table 4 reports that the mean (median) firm in our sample repatriated 69.90% (94%) of the PRE they reported on their 2002 financial statements. We define a dummy variable DREPAT set equal to 1 for firms in the top three quartiles of the total amount of PRE repatriated as reported on the firm's 2005 financial statements scaled by the total PRE reported on the firm's 2002 financial statements (the amount eligible for the reduced tax rates in AJCA), all other observations are set to zero. Results are reported in column (2) of Table 4. TAX in the pre-AJCA period is significantly negatively priced, the highest quartile firms ($D_AJCA \times TAX$) have an estimated coefficient of 1.34 but the coefficient is not significantly different than zero, and while as predicted the estimated coefficient on $D_AJCA \times TAX \times DREPAT$ is positive, it is not significant at conventional levels with a p value of 0.14.

Overall ROA

In their examination of how the AJCA 2004 influenced corporate investment behavior, Blouin and Krull (2006) hypothesize that firms will only have an incentive to repatriate under the AJCA if investment opportunities both in the U.S. and abroad are low. We use total return-on-assets (ROA) as a proxy for a firm's foreign and domestic investment opportunities, and define a dummy variable, DROA, which is set to one for firm-year observations with ROA in the bottom three quartiles of the sample distribution, and set to 0 for all other firm-year observations. Results are reported in column (3) of Table 4. TAX in the pre-AJCA period is significantly negatively priced, the highest quartile firms ($D_AJCA \times DROA$, those least likely to repatriate) have an estimated coefficient of 0.30 and is not significantly different than zero, and the DROA firms exhibit a positive

coefficient on TAX post AJCA (those most likely to repatriate under the AJCA) of 5.91 which is significantly greater than zero.³²

Stock Return Tests

Our second set of tests use a returns model to examine the markets' assessment of the effect of the AJCA 2004 on U.S. MNCs. The purpose of this analysis is to compliment the price-level tests using an approach less subject to econometric concerns (heteroscedasticity, scale and correlated omitted variable problems in the price-level approach, Christie 1987, Landsman and Magliolo 1988, Easton 1998, Barth and Clinch 1996, and Kothari and Zimmerman 1995). We develop our returns model in the appendix starting with the price-level model in equation (7). The returns model is

$$R_{it} = \alpha_0 + \alpha_1 DNI_{it} + \alpha_2 DNI_{it-1} + \alpha_3 FNI_{it} + \alpha_4 FNI_{it-1} + \alpha_5 \Delta PRE_{it} + \alpha_6 \Delta TAX_{it} + \alpha_7 SAVINGS_{it} + \varepsilon_{it} \quad (11)$$

where all variable (except returns) are scaled by the market value of equity at the start of the cumulation period,

R_{it} = is the cumulative market model abnormal return for year t, measured over the 12-month period ending three months after the firm's fiscal year-end. The market model parameters are estimated form a time-series firm specific regression of stock return on the CRSP value weighted market return. The estimation period for this

³² In our model based on Hartman and Scholes et al., prior to the tax holiday, the investment horizon should not impact the decision to repatriate, and investment horizon (as proxied by ROA) should not affect the coefficient on the TAX variable in our price-level regression. This result should hold as long as we are assuming firms will one-day eventually repatriate and that the repatriation tax will remain constant through time. Thus to check whether TAX is priced less negatively (closer to zero) before AJCA for high ROA firms, we estimate our price-level model for 2001 and 2002 interacting DROA with our tax variable. The estimated coefficient on the interaction term TAX * DROA is not significant and thus TAX is not differentially priced as a function of DROA.

regression covers 60 months prior to year t. If a firm has less than 36 monthly returns we set $\beta = 1$ and $\alpha = 0$.

DNI_{it} = after-tax financial statement domestic income for year t, calculated as total pre-tax net income (data 237) minus foreign net income (FNI),

FNI_{it} = after-tax financial statement foreign income for year t, computed as foreign pretax income (data 273) minus foreign income taxes (data 64),

DNI_{it-1} = after-tax financial statement domestic income for year t-1,

FNI_{it-1} = after-tax financial statement foreign income for year t-1,

ΔPRE_{it} = Change in permanently reinvested earnings (PRE) from the previous year,

$\Delta TAX_{it} = \Delta PRE_{it} / (1 - t_f) \times (35\% - t_f)$,

$SAVINGS_{it} = .85 * \text{Pretax Dividend} (.35 - t_f)$ where $\text{Pretax Dividend} = PRE_{t-1} / (1 - t_f)$

for 2003 firm-year observations, and zero for all other firm-year observations.

We include current and lagged domestic and foreign earnings in the returns regression model because this specification does not constrain the coefficient on the lagged income measure to be 1, thus allowing for a more general earnings specification (such as an autoregressive or mean reverting model of annual earnings). ΔTAX is the estimated revision (change) each year in repatriation taxes due to a change in the amount of foreign source earnings designated as permanently reinvested. To examine the impact that the likely passage of the tax holiday had on stock returns we calculate the potential tax savings that would accrue to our set of sample firms were they to repatriate all of their PRE during the proposed tax holiday. The SAVINGS variable is calculated based on the PRE reported by our sample firms on their financial statements at the end of the 2002

fiscal year because, as discussed above, the eligible PRE for repatriation under the tax holiday is limited to the amount of PRE reported as of the last audited financial statements filed on or before June 30, 2003. SAVINGS represents the estimated expected reduction in tax resulting from the passage of the AJCA 2004 on any earnings repatriated during the window provided by the tax holiday. If investors anticipate that our sample of firms will repatriate all of their PRE during the tax holiday then the SAVINGS variable would represent a revision in an expected future expense. It is important to note that this approach assumes that prior to 2003 investors did not anticipate a change in the rate at which unrepatriated foreign earnings were taxed. Additionally, we assume that investors assumed that the entire PRE qualified for the tax holiday (and not just the extraordinary amount defined as the excess of a prior three-year average dividend repatriation. By estimating SAVINGS on the entire PRE we are implicitly assuming zero prior repatriations during the base period). These are simplifying assumptions, which are likely to overstate the actual benefit derived by each firm from the AJCA 2004. As illustrated by the inequality in equation (6) the true savings associated with the AJCA 2004 is going to be a function of the firm's investment horizon, foreign and domestic rates of return and the amount of PRE eligible for the holiday.

Descriptive statistics on the variables are reported in Table 5, panel A. The key variable of interest is (the unexpected) SAVINGS with a mean (median) estimate of \$308 (\$99) million. The median SAVINGS is approximately 15% of concurrent net income. Twenty of the 67 firm-year observations have SAVINGS set to 0 because their estimated tax rate is greater than the U.S. tax rate (so no incremental U.S. tax is due). When these firms are omitted the results are unchanged. The correlation matrix in panel B shows

some significant positive correlations, with the highest being between ΔTAX and ΔPRE which is expected given ΔTAX is a function of ΔPRE .

The results of estimating equation (11) are presented in panel C of Table 5. The results of a regression of returns on current and lagged earnings without the $SAVINGS_{it}$ variable are reported in column (1). The results indicate that both current and lagged domestic and foreign earnings are significantly associated with returns. In the special case where both domestic and foreign earnings follow a random walk we would expect that $(\alpha_1 = -\alpha_2)$ and $(\alpha_3 = -\alpha_4)$. There is no significant difference between the coefficients on current and lagged domestic earnings, however the coefficients on current period foreign earnings, α_3 , is significantly different from the coefficient on lagged foreign earnings, $-\alpha_4$, for both the regression in column (1) and in column (2). Inferences are unchanged if we omit firm-year observations with current year negative domestic or foreign earnings. The estimated coefficient on ΔTAX is negative but not significant at conventional levels.

When we add $SAVINGS$ to the model in column (2), the coefficient on ΔTAX remains negative and is significant at the .08 level. The estimated coefficient on $SAVINGS$, our main test variable, is 2.38 and is significant at the .02 level. We expect a coefficient of approximately 1 on $SAVINGS$ (absent measurement error) because we think investors would view the tax holiday as a one-time windfall. The estimated coefficient on $SAVINGS$ at 2.38 while greater than 1, is not significantly greater than 1 consistent with our expectations. This result suggests that investors anticipated that the U.S. MNCs in our sample would repatriate the majority of their PRE during the tax holiday and that investors incorporated this information into their expectations during the

2003 fiscal year. We also estimated similar regressions using 2002 and 2004 firm-year observations and, as expected, the SAVINGS variable was not significant in either of these tests. This finding is consistent with the market incorporating the tax benefit associated with the repatriation tax holiday during 2003.

When we estimate the model using the change in domestic and foreign earnings the estimated coefficient on the domestic earnings variable is 1.32, the coefficient on the foreign earnings variable is 3.57 and the coefficient on SAVINGS is 2.20 (all three significantly greater than 0).

Finally, consistent with the sensitivity analyses in the price-level regressions, we interact DSPREAD, DREPAT, and DROA (variables proxying for the probability of firms repatriating during the tax holiday) with SAVINGS. The untabulated results indicate that while the estimated coefficients on the interaction terms are of the correct positive sign, none are significant.

VI. Conclusion

This study provides evidence consistent with investors recognizing the incentive provided by the 85% deduction for cash dividends from permanently reinvested foreign earnings under the AJCA 2004. The results imply that when passage of the dividend deduction became probable investors anticipated that the U.S. MNCs in our sample with significant amounts of permanently reinvested foreign earnings would repatriate those earnings during the window provided by the AJCA 2004. This is particularly interesting in light of the fact that during the period examined in our tests none of our sample firms had indicated the extent of the permanently reinvested earnings they intended to repatriate during the tax holiday.

The results also support the finding of Collins et al. (2001) that firms are unable to convince investors that tax savings associated with earnings in low tax countries will be permanent. Specifically, we find that prior to the time passage of the dividend deduction became probable, investors capitalized the unrecognized deferred tax liability associated with PRE into current stock prices. The negative coefficient on TAX for this period of time is consistent with investors anticipating the eventual remittance and taxation of those earnings designated as permanently reinvested. In addition, we find evidence consistent with investors reverting to pricing a greater degree of the deferred repatriation tax on unrepatriated foreign earnings that firms chose not to repatriate during the tax holiday. This finding is inconsistent with investors anticipating a new tax holiday will be provided by Congress in the near future.

Appendix A

The relation between the price-level and returns model.

Our price level model in the text

$$MVE_i = \beta_0 + \beta_1 DNI_i + \beta_2 FNI_i + \beta_3 CS_i + \beta_4 RE_i + \beta_5 PRE_i + \beta_6 TAX_i + \beta_7 D_AJCA_i + \beta_8 (D_AJCA_i \times TAX_i) + \varepsilon_i \quad (7)$$

Ignoring the AJCA (7) simplifies to

$$MVE_i = \beta_0 + \beta_1 DNI_i + \beta_2 FNI_i + \beta_3 CS_i + \beta_4 RE_i + \beta_5 PRE_i + \beta_6 TAX_i + \varepsilon_i \quad (A1)$$

Taking first differences gives

$$\Delta MVE_{it} = \beta_1 \Delta DNI_{it} + \beta_2 \Delta FNI_{it} + \beta_3 \Delta CS_{it} + \beta_4 \Delta RE_{it} + \beta_5 \Delta PRE_{it} + \beta_6 \Delta TAX_{it} + \varepsilon_{it} \quad (A2)$$

where β_0 drops out if assumed constant through time.

Deflating all variables by lagged MVE, results in the LHS: $R_{it} = \Delta MVE_{it} / MVE_{it-1}$. With no new capital contributions, $\Delta CS_{it} = 0$. With no dividends, ΔRE_{it} = the current period earnings, which can be written as the sum of DNI and FNI.

Recall TAX is the estimated incremental tax on repatriation of foreign earnings designated as permanently reinvested

$$TAX_{it} = PRE_{it} / (1 - t_f) * (35\% - t_f). \quad (A3)$$

With no tax holiday, and no change in t_d (=35% in equation (A3)),

$$\Delta TAX_{it} = \Delta PRE_{it} / (1 - t_f) * (35\% - t_f). \quad (A4)$$

Substituting these relations gives

$$R_{it} = \beta_0 + \beta_1 \Delta DNI_{it} + \beta_2 \Delta FNI_{it} + \beta_4 DNI_{it} + \beta_4 FNI_{it} + \beta_5 \Delta PRE_{it} + \beta_6 \Delta TAX_{it} + \varepsilon_{it} \quad (A5)$$

Note that this specification is econometrically equivalent (in the sense that the R^2 are the same, and the coefficients can be rearranged to get from one equation to the other) as

$$R_{it} = \beta_0 + \beta_1 DNI_{it} + \beta_2 DNI_{it-1} + \beta_3 FNI_{it} + \beta_4 FNI_{it-1} + \beta_5 \Delta PRE_{it} + \beta_6 \Delta TAX_{it} + \varepsilon_{it} \quad (A5')$$

We define SAVINGS = $.85 PRE_{it-1} / (1 - t_f) * (35\% - t_f)$, which is the expected tax savings as a result of the AJCA assuming the entire PRE is eligible for the tax holiday. This variable reflects the markets revision in TAXES due on PRE_{it-1} and because even though AJCA passed in 2004, the market learned of the AJCA in the middle of 2003 and thus will be reflected in returns in 2003.

During 2003, when AJCA passed, the total change in TAX is the sum of two components: $\Delta PRE_{it} / (1 - t_f) * (35\% - t_f) + SAVINGS$. The first term is the usual ΔTAX .

This analysis leads us to the following regression model

$$R_{it} = \alpha_0 + \alpha_1 DNI_{it} + \alpha_2 DNI_{it-1} + \alpha_3 FNI_{it} + \alpha_4 FNI_{it-1} + \alpha_5 \Delta PRE_{it} + \alpha_6 \Delta TAX_{it} + \alpha_7 SAVINGS_{it} + \varepsilon_{it} \quad (11)$$

where SAVINGS is 0 in each year except 2003.

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Table 1
Sample Selection and Industry Distribution

Panel A: Summary of the Sample Selection Criteria: (2001 - 2004)

Total sample of firm-year observations with PRE > \$500 million in 2002 ^a	468
Less firm-year observations that did not disclose PRE in their annual report	41
Less firm-year observations with missing regression variables ^b	115
Complete firm-year observations	312

Panel B: Industry Distribution of Sample Firm-Year Observations

<u>SIC Code</u>	<u>Industry Type</u>	<u>Number of Companies</u>	<u>Mean MVE</u>	<u>Mean PRE</u>
1-999	Agriculture, Forestry, Fishing	3	1,483	1,117
1000-1999	Mining, Building	8	10,749	2,500
2000-2999	Manufacturing	109	44,396	4,876
3000-3999	Manufacturing	133	20,766	2,520
4000-4999	Transportation, Communication, Electric, Gas	2	3,680	1,350
5000-5999	Wholesale, Retail	9	21,734	2,237
6000-6999	Financial Services	20	47,753	2,665
7000-7999	Hotels, Services	22	79,292	4,411
8000-8999	Services	3	5,173	841
9000-9999	International, Non-Operating	3	314,368	21,667
Total		312		

^aThe initial sample is based on 117 firms identified by Albring et al. (2005) as having PRE > \$500 million in 2002. The sample is comprised of 2001-2004 fiscal-year observations for these firms.

^bWe require five years of foreign tax and foreign earnings data to calculate the average foreign tax rate.

Table 2
Descriptive Statistics

<u>Variable</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Std Dev</u>	<u>Maximum</u>	<u>Minimum</u>			
<u>Panel A. Variables in \$ Millions</u>									
Total Assets - TA	312	42,205	13,369	107,849	798,660	1,211			
Market Value of Equity - MVE	312	38,011	14,573	57,189	381,744	248			
Domestic after-tax net income - DNI	312	717	213	1,518	-3,223	9,294			
Foreign after-tax net income - FNI	312	836	333	1,350	-506	8,365			
Residual common equity - CS	312	2,128	851	7,864	56,396	-19,825			
All non-PRE retained earnings - RE	312	4,142	1,483	10,535	69,649	-27,701			
Permanently reinvested earnings - PRE	312	3,662	1,604	5,499	51,600	0			
Unrecognized deferred tax liability on PRE - TAX	312	375	99	904	9,347	0			
Foreign current tax rate - t_f	312	0.31	0.29	0.15	0.99	0.04			
SIZE – ln(MVE)	312	9.72	9.59	1.31	12.85	5.51			
<u>Panel B. Variables Scaled by Total Assets</u>									
MVE	312	1.55	1.14	1.26	6.15	0.05			
DNI	312	0.02	0.02	0.04	-0.18	0.13			
FNI	312	0.04	0.03	0.03	-0.03	0.15			
CS	312	0.07	0.09	0.26	0.76	-0.95			
RE	312	0.14	0.13	0.25	0.74	-0.75			
PRE	312	0.18	0.17	0.13	0.73	0.00			
TAX	312	0.02	0.01	0.03	0.13	0.00			
<u>Panel C. Pearson and Spearman Correlation Coefficients^a</u>									
	<u>MVE</u>	<u>DNI</u>	<u>FNI</u>	<u>CS</u>	<u>RE</u>	<u>PRE</u>	<u>TAX</u>	<u>SIZE</u>	
MVE		0.55	0.14	-0.26	0.21	0.02	-0.07	0.25	
DNI	0.36		0.14	-0.26	0.36	0.06	-0.07	0.47	
FNI	0.21	0.25		0.11	0.05	0.56	0.57	0.18	
CS	-0.37	-0.32	0.10		-0.66	-0.12	-0.05	-0.14	
RE	0.21	0.42	0.13	-0.61		-0.21	-0.19	0.29	
PRE	0.06	0.08	0.57	-0.06	-0.12		0.76	-0.05	
TAX	-0.04	-0.06	0.61	0.02	-0.02	0.61		-0.06	
SIZE	0.26	0.43	0.22	-0.20	0.23	-0.09	-0.02		

^a All variables except SIZE scaled by total assets at year-end. Bold face correlation coefficients indicate two-tailed significance at the .05 level

Table 3

Estimate of the Effect of Unrecognized Deferred Taxes associated with PRE on Valuation

$$MVE_i = \beta_0 + \beta_1 DNI_i + \beta_2 FNI_i + \beta_3 CS_i + \beta_4 RE_i + \beta_5 PRE_i + \beta_6 TAX_i + \beta_7 D_AJCA_i + \beta_8 (D_AJCA_i \times TAX_i) + \beta_9 SIZE + \varepsilon_i$$

(Obs = 312)

<u>Variable</u>	Expected <u>Sign</u>	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>
INTERCEPT	?	-0.06 (0.52)	-0.16 (0.04)	-1.81 (0.00)	-1.96 (0.00)
CS	+	1.70 (0.00)	1.65 (0.00)	1.65 (0.00)	1.73 (0.00)
RE	+	2.42 (0.00)	2.40 (0.00)	2.27 (0.00)	2.22 (0.00)
PRE	+	2.66 (0.00)	2.28 (0.00)	2.85 (0.00)	3.15 (0.00)
DNI	+	10.14 (0.00)	10.30 (0.00)	7.68 (0.00)	4.40 (0.00)
FNI	+	18.55 (0.00)	17.54 (0.00)	16.77 (0.00)	15.03 (0.00)
TAX	-	-5.11 (0.03)		-4.29 (0.05)	-4.12 (0.06)
D_AJCA	?	-0.29 (0.00)		-0.34 (0.00)	-0.33 (0.00)
(D_AJCA × TAX)	+	4.29 (0.05)		4.46 (0.04)	3.97 (0.07)
SIZE	+			0.19 (0.00)	0.22 (0.00)
D_2005	?				-0.32 (0.00)
(D_2005 × TAX)	?				0.65 (0.43)
Adjusted - R²		69.52%	68.82%	72.38%	67.20%

All variables except size and the dummy variables are scaled by total assets at year-end.

MVE is the market value of common equity three months after fiscal year-end.

DNI is after tax financial statement domestic income.

FNI is after tax financial statement foreign income.

CS is total common equity less total retained earnings at the end of the fiscal year.

RE is total retained earnings less PRE at the end of the fiscal year.

PRE is permanently reinvested earnings reported in the financial statement footnotes.

TAX is the unrecognized deferred tax liability associated with PRE at the end of the fiscal year.

D_AJCA is a dummy variable set equal to 1 for 2003 and 2004 fiscal year observations, and set equal to 0 for all other observations.

SIZE is the log of market value of equity.

D_2005 is a dummy variable set equal to 1 for 2005 fiscal year observations, and set equal to 0 for all other observations.

Column (4) reports the results of a regression estimated including 2005 fiscal year observations. A total of 392 firm-year observations are used in this regression.

Values in parenthesis represent p-values for White adjusted t-statistics.

Table 4

Sensitivity Analysis in Price-level regression

Panel A. Descriptive Statistics

<u>Variable</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Std Dev</u>	<u>Maximum</u>	<u>Minimum</u>
Total Sales	304	21,111	10,180	31,366	190,812	912
Foreign Sales	304	8,747	4,299	12,516	62,700	392
Domestic Sales	304	12,364	5,762	20,686	136,143	137
Foreign PM	304	0.11	0.08	0.11	0.52	-0.38
Domestic PM	304	0.05	0.05	0.17	0.84	-1.60
Foreign ROA	304	0.09	0.07	0.12	1.42	-0.09
Domestic ROA	304	0.05	0.04	0.13	0.72	-0.63
Asset Turnover	304	0.91	0.85	0.57	8.12	0.07
Amount Repatriated	57	3,229	1,100	6,026	37,000	0
Percentage of 2002 PRE	57	69.89%	94.00%	36.90%	100.00%	0.00%

Foreign sales is total international sales from the Compustat Segment database.

Domestic sales is total sales (data 12) less foreign sales.

Foreign PM is foreign net income (data 273 – data 64) divided by foreign sales.

Domestic PM is domestic net income (data 237 – FNI) divided by domestic sales.

Foreign ROA is foreign PM multiplied by asset turnover.

Domestic ROA is domestic PM multiplied by asset turnover.

Asset turnover is total sales divided by lagged total assets.

Amount repatriated under AJCA 2004 as reported by firms.

Percentage of 2002 PRE is calculated as the total amount repatriated as reported on the firm's 2005 10K divided by the total amount of PRE reported on the firm's 2002 10K.

Table 4 (cont.)

Panel B: Regression results: Estimate of the Effect of Differential Foreign and Domestic Investment Opportunities on the Deferred Taxes Associated with PRE

$$MVE_i = \beta_0 + \beta_1 DNI_i + \beta_2 FNI_i + \beta_3 CS_i + \beta_4 RE_i + \beta_5 PRE_i + \beta_6 TAX_i + \beta_7 D_AJCA_i + \beta_8 (D_AJCA_i \times TAX_i) + \beta_9 Z_i + \beta_{10} (D_AJCA_i \times TAX_i \times Z_i) + \varepsilon_i$$

<u>Variable</u>	<u>Expected Sign</u>	(1) Z _i = DSPREAD	(2) Z _i = DREPAT	(3) Z _i = DROA
INTERCEPT	?	0.28 (0.02)	-0.62 (0.52)	0.86 (0.00)
CS	+	1.63 (0.00)	2.32 (0.00)	1.74 (0.00)
RE	+	2.26 (0.00)	3.03 (0.00)	2.39 (0.00)
PRE	+	2.42 (0.00)	3.04 (0.00)	2.65 (0.00)
DNI	+	12.25 (0.00)	11.30 (0.00)	6.05 (0.00)
FNI	+	16.49 (0.00)	21.61 (0.00)	13.86 (0.00)
TAX	-	-5.00 (0.04)	-5.44 (0.03)	-5.74 (0.01)
D_AJCA	?	-0.30 (0.00)	-0.32 (0.00)	-0.28 (0.00)
(D_AJCA × TAX)	?	1.40 (0.33)	1.34 (0.37)	0.39 (0.45)
Z	?	-0.32 (0.01)	0.31 (0.01)	-0.86 (0.00)
(D_AJCA × TAX × Z)	+	4.32 (0.10)	3.98 (0.14)	5.91 (0.02)
N		304	208	312
Adjusted R ²		70.27%	73.51%	72.32%

Notes overpage:

Table 4 (cont.)

All continuous variables are scaled by total assets at year-end.

MVE is the market value of common equity three months after fiscal year-end.

DNI is after tax financial statement domestic income.

FNI is after tax financial statement foreign income.

CS is total common equity less total retained earnings at the end of the fiscal year.

RE is total retained earnings less PRE at the end of the fiscal year.

TAX is the unrecognized deferred tax liability associated with PRE at the end of the fiscal year.

DSPREAD is a dummy variable set equal to 1 for firm-year observations with a spread between foreign and domestic return on assets in the bottom three quartiles of the sample, and set to zero for all other observations.

Foreign and Domestic return on assets are calculated as (Foreign Profit Margin \times Asset Turnover) and (Domestic Profit Margin \times Asset Turnover) respectively. Where, Foreign Profit Margin is calculated as FNI divided by foreign sales, and domestic profit margin is calculated as DNI divided by (total sales less foreign sales). Asset Turnover is calculated as total sales divided by lagged total assets.

DREPAT is a dummy variable set equal to 1 for firms in the top three quartiles of the total amount of PRE repatriated as reported on the firm's 2005 financial statements divided by the total PRE reported on the firm's 2002 financial statements, all other observations are set to zero.

DROA is a dummy variable set equal to 1 for firm-year observations with ROA in the bottom three quartiles of the sample, and set to zero for all other observations.

All regressions use data from years 2001-2004. The reduced sample size for the DREPAT regressions reflects loss of firm-year observations where we were unable to collect the actual amount of PRE repatriated under AJCA 2004 from their 2005 10K. For DSPREAD we lose 12 firm-year observations as a result of merging with the segment database to get the foreign sales number.

Values in parenthesis represent p-values for White adjusted t-statistics.

Reported p-values reflect two-tailed tests for the intercept and one-tailed tests for the estimated coefficients.

Table 5
Returns Regression Results (N= 204, Years 2002-2004)

Panel A: Returns Regressions Descriptive Statistics

<u>Variable</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Std Dev</u>	<u>Maximum</u>	<u>Minimum</u>
<i>Variables in \$ Millions</i>						
DNI _{it}	204	1,012	379	1,710	9,294	-2,179
DNI _{it-1}	204	887	270	1,697	9,553	-1,028
FNI _{it}	204	997	436	1,438	8,365	-506
FNI _{it-1}	204	793	335	1,205	7,396	-187
ΔPRE _{it}	204	644	300	1,912	13,600	-8,800
ΔTAX _{it}	204	60	0	291	2,464	-1,723
SAVINGS _{it}	67	308	99	656	4,240	0
<i>Regression Variables (scaled by lagged MVE)</i>						
R _{it}	204	0.015	0.005	0.227	0.731	-0.494
DNI _{it}	204	0.020	0.021	0.030	0.178	-0.096
DNI _{it-1}	204	0.017	0.018	0.026	0.114	-0.096
FNI _{it}	204	0.027	0.022	0.024	0.147	-0.121
FNI _{it-1}	204	0.021	0.017	0.019	0.104	-0.040
ΔPRE _{it}	204	0.020	0.017	0.046	0.202	-0.368
ΔTAX _{it}	204	0.001	0.000	0.006	0.014	-0.072
SAVINGS _{it}	67	0.013	0.008	0.022	0.146	0.000

Panel B: Pearson and Spearman Correlation Coefficients^a

	R _{it}	DNI _{it}	FNI _{it}	ΔTAX _{it}	SAVINGS _{it}	ΔPRE _{it}
R _{it}		0.06	0.32	0.01	0.14	0.08
DNI _{it}	0.13		-0.23	0.20	-0.11	0.09
FNI _{it}	0.21	-0.09		0.08	0.12	0.20
ΔTAX _{it}	-0.03	-0.14	0.31		0.15	0.75
SAVINGS _{it}	-0.04	-0.01	0.14	0.28		0.03
ΔPRE _{it}	0.12	-0.06	0.39	0.61	0.12	

Table 5 (cont.)

Panel C: Returns Regression Results

$$R_{it} = \alpha_0 + \alpha_1 DNI_{it} + \alpha_2 DNI_{it-1} + \alpha_3 FNI_{it} + \alpha_4 FNI_{it-1} + \alpha_5 \Delta PRE_{it} + \alpha_6 \Delta TAX_{it} + \alpha_7 SAVINGS_{it} + \varepsilon_{it}$$

<u>Variable</u>	<u>Expected Sign</u>	<u>(1)</u>	<u>(2)</u>
INTERCEPT	?	-0.06 (0.02)	-0.07 (0.00)
DNI _{it}	+	1.75 (0.00)	1.80 (0.00)
DNI _{it-1}	-	-1.25 (0.02)	-1.13 (0.03)
FNI _{it}	+	4.69 (0.00)	4.38 (0.00)
FNI _{it-1}	-	-2.24 (0.01)	-1.91 (0.03)
ΔPRE _{it}	+	0.31 (0.26)	0.46 (0.17)
ΔTAX _{it}	-	-3.19 (0.16)	-4.71 (0.08)
SAVINGS _{it}	+		2.38 (0.02)
N		204	204
Adjusted R ²		16.86%	18.75%

Columns (1) and (2) are estimated on 2002 through 2004 fiscal year observations.

All variables except returns are scaled by market value of equity as at start of return cumulation period.

R_{it} is the cumulative market model abnormal return for year t, measured over the 12-month period ending three months after the firm's fiscal year-end. The market model parameters are estimated from a time-series firm specific regression of stock return on the CRSP value weighted market return. The estimation period for this regression covers 60 months prior to year t. If a firm has less than 36 monthly returns we set beta = 1 and alpha = 0.

DNI_{it} = Domestic net income before extraordinary items.

DNI_{it-1} = Domestic net income before extraordinary items from the previous year.

FNI_{it} = Foreign after-tax net income.

FNI_{it-1} = Foreign after-tax net income from the previous year.

ΔPRE_{it} = Change in permanently reinvested earnings from the previous year.

ΔTAX_{it} = ΔPRE_{it} / (1 - t_f) × (35% - t_f).

SAVINGS_{it} is set equal to .85 * Pretax Dividend (35 - t_f) where Pretax Dividend = PRE_{t-1} / (1 - t_f) for 2003 firm-year observations, and set equal to zero for all other firm-year observations.

PRE is permanently reinvested earnings reported in the financial statement footnotes.

Values in parenthesis represent p-values for White adjusted t-statistics.

Reported p-values reflect two-tailed tests for the intercept and one-tailed tests for the estimated coefficients.

^aBold face correlation coefficients indicate two-tailed significance at the .05 level.