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The American Jobs Creation Act of 2004 (the Act) creates a temporary tax holiday that effectively reduces the U.S. tax rate on repatriations from foreign subsidiaries from 35% to 5.25%. Firms receive the reduced tax rate by electing to take an 85% dividends received deduction on repatriations in 2004 or 2005. This paper investigates the characteristics of firms that repatriate under the Act and how they use the repatriated funds. We find that firms that repatriate under the Act have lower investment opportunities and higher free cash flows than nonrepatriating firms. Further, we find that repatriating firms increase share repurchases during 2005 by approximately $60 billion more than nonrepatriating firms, an amount that cannot be explained by differences in earnings between the two groups of firms. This increase represents about 20% of the $291.6 billion repatriated by our sample firms under the Act.

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Bringing it home: A study of the incentives surrounding the repatriation of foreign earnings under the American Jobs Creation Act of 2004

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July 2008

Abstract

The American Jobs Creation Act of 2004 (the Act) creates a temporary tax holiday that effectively reduces the U.S. tax rate on repatriations from foreign subsidiaries from 35 percent to 5.25 percent. Firms receive the reduced tax rate by electing to take an 85 percent dividends received deduction on repatriations in 2004 or 2005. This paper investigates the characteristics of firms that repatriate under the Act and how they use the repatriated funds. We find that firms that repatriate under the Act have lower investment opportunities and higher free cash flows than non-repatriating firms. Further, we find that repatriating firms increase share repurchases during 2005 by $55.80 to $60.85 billion more than non-repatriating firms. This increase represents 19.14 to 20.87 percent of the $291.6 billion repatriated under the Act. This paper provides useful information to policy makers about the effect of a temporary tax holiday on firms' investment behavior.

Key Words: Multinational Firms, Foreign direct investment, Corporate Taxation, Payout policy, Repurchases

1. Introduction

In recent years, U.S. multinational corporations' profits surged as growth in global markets outpaced domestic growth.[1] This international expansion led to record foreign profits for U.S. firms, which remain invested overseas unless repatriated to the United States. To encourage firms to invest these profits in the U.S., the American Jobs Creation Act of 2004 (the Act) temporarily decreases the tax burden on repatriations of foreign earnings by effectively reducing the maximum tax rate on overseas profits from 35 percent to 5.25 percent. Firms receive the reduced tax rate by electing to take an 85 percent dividends received deduction on repatriations of foreign earnings in either 2004 or 2005.

Because the intent of the legislation is to increase domestic investment, firms must have a plan to use funds remitted during the tax holiday for such purposes as capital expenditures, research and development, debt repayment, and certain merger and acquisition activity. Subsequent guidance issued by the Internal Revenue Service (IRS) specifically disallows using the funds for dividends, share repurchases, and executive compensation. Initial estimates indicate that firms could repatriate up to $426 billion under the Act (Albring, Dzuranin, and Mills 2005). Although this estimate suggests that the Act will move large amounts of cash into U.S. investments, anecdotal evidence suggests that firms are using the repatriated funds to repurchase shares, one of the purposes specifically disallowed by the IRS.[2]

We study the characteristics of firms that repatriate under the Act and how they use those funds. Existing theory regarding repatriation of foreign earnings finds that taxes on unremitted

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[1] "U.S. Multinationals Reap Overseas Bounty", *Wall Street Journal*, April 4, 2005, A2.
[2] See for example, "Buybacks Soar; Firms Deny a Link to Repatriated Profit-Tax-Break", *Wall Street Journal*, October 24, 2005, A2. As another example, the following quote is from "Postcards From a Tax Holiday", *The New York Times*, November 12, 2005: "Hewlett-Packard has announced a repatriation of $14.5 billion, layoffs of 14,500 workers and stock buybacks of more than $4 billion for the first half of 2005, about three times the size of its buybacks in the period a year earlier."

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foreign earnings do not affect repatriations when tax rates and after-local-tax returns are constant. Under these assumptions, firms will repatriate when the after-tax return abroad is low relative to the after-tax return in the United States (Hartman 1985; Scholes et al. 2005).[3] We extend this theoretical framework to incorporate the temporary tax holiday and argue that, because the Act does not change the after-local-tax returns to investment, firms likely to repatriate under the Act are those with limited investment opportunities in both the U.S. and abroad. Therefore, distributing the repatriated cash to shareholders is the economically efficient outcome for many firms that benefit from the tax holiday.

Because the nature of the Act is a one-time only tax holiday, we expect that firms are more likely to increase repurchases than dividends. Repurchases are an effective method for distributing a positive transitory shock to cash flow since they do not imply a commitment to make regular distributions (Guay and Harford 2000). Furthermore, unlike dividends, open market repurchases do not require a formal announcement thereby increasing the opacity of shareholder distributions made with repatriated funds.

We test our predictions by investigating the investment opportunities, free cash flows, and payout behavior of firms that disclose their repatriation intentions under the Act. Financial reporting rules require firms considering repatriation under the Act to disclose a summary of the repatriation provision as it applies to the firm, estimates of possible amounts of repatriation, and the related tax effects.[4] We perform a search of SEC 10-K and 10-Q filings from October 22, 2004 through September 30, 2006 for disclosures of firms' repatriation plans. Ultimately, we identify 357 firms that repatriate a total of $291.6 billion under the Act.

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[3] Though the theory suggests that only after-tax returns affect the decision to repatriate, this result relies on the assumption that taxes and returns are constant. A large empirical literature finds evidence that taxes affect repatriations (Hines and Hubbard 1990; Desai, Foley, and Hines 2001; Altshuler and Newlon 1993; Grubert 1998) and that this effect relates to inter-temporal changes in tax rates (Altshuler, Newlon and Randolph 1995).
[4] See the Financial Accounting Standards Board Staff Position No. 109-2 (FSP 109-2).

Using a sample of 357 repatriating and 2,339 non-repatriating firms, we find evidence consistent with repatriating firms facing limited investment opportunities. Specifically, we find that the probability that a firm repatriates under the Act is increasing in free cash flows and decreasing in the changes in return on assets and market to book ratio in the years leading up to the Act. If firms that repatriate have limited investment opportunities, then we further expect that repatriating firms will distribute repatriated earnings in an effort to mitigate agency concerns. Although we find evidence that total repurchases across all multinational firms increase in 2005, the mean increase in repurchases for repatriating firms is $224 million compared to only $18 million for non-repatriating firms. Using a Compustat (CRSP) measure of repurchases, we estimate that, after controlling for other predictors of repurchases, repatriating firms increase share repurchases during 2005 by $60.85 billion ($55.80 billion) more than non-repatriating firms.[5] This increase represents 20.87 (19.14) percent of the total amount of repatriations under the Act reported by our sample firms ($291.6 billion).

This study makes three important contributions. First, this paper contributes to our understanding of the effect of the Act on firm behavior, and should be of interest to policy makers. Other studies that investigate the Act focus on the valuation effects of the tax holiday. De Waegenaere and Sansing (2008) model the effects of a tax holiday on the market valuation of foreign earnings reinvested in foreign assets and the related deferred tax liabilities. They show that the value of a foreign subsidiary that repatriates during a tax holiday increases by the amount of tax savings under the holiday. Consistent with the theory in De Waegenaere and Sansing (2008), Oler, Shevlin, and Wilson (2007) find that during the tax holiday, firms' market values increase in the amount of potential tax savings under the Act. In contrast, we investigate the

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[5] The mean increase in affected firms is 0.205 percent of assets per quarter and the cumulative assets for the affected firms is $3.340 trillion.

characteristics of firms that repatriate under the Act and how firms use these funds. We find

evidence that, in spite of having plans to invest in approved activities, repatriating firms

significantly increase payments to shareholders, and the amount of this increase is related to the

amount of repatriation. Although these results suggest that firms are using repatriated funds for a

disallowed purpose, the Act does not require a direct tracing of the use of funds. Due to the

fungible nature of cash, firms could have made the investments stated in their reinvestment plan,

but then used other freed up funds for share repurchases. Though this may in some way violate

the intention of the Act, these firms are putting overseas profits back into the U.S. economy –

just not in the manner that Congress intended. Whether distribution to shareholders is the

preferred way to put the funds into the U.S. economy is subject to debate.[6] Nonetheless, our

results provide useful information about how firms respond to a temporary tax holiday.

Second, the results of this study corroborate the evidence in existing studies that find that

repatriation taxes are a binding constraint on firms' cash management. For example, Foley,

Hartzell, Titman, and Twite (2007) find that repatriation taxes help explain why multinational

firms hold excess cash. Consistent with Foley et al. (2007), we find evidence that the reduction

of repatriation taxes induces firms with high free cash flows to bring foreign earnings back into

the United States. Furthermore, the large response to the tax holiday suggests that strategies to

de-facto repatriate using complex organizational structures (e.g., cross-border special purposes

entities) do not completely remove the constraint of repatriation taxes on intra-firm cash flows.

Third, we contribute to the literature that investigates whether firms repurchase shares to

reduce agency costs of free cash flows (Jensen 1986). In a setting in which theory predicts

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[6] On one hand, the funds may be more quickly injected into the U.S. economy if they are paid out to shareholders rather than sitting in a corporate account waiting for board approval. On the other hand, if the proceeds from the share repurchases are ultimately deposited into personal savings accounts then, at least in the near-term, the repatriated funds will not lead to incremental spending and, hence, job creation.

agency benefits from repatriation and subsequent distribution to shareholders, we find evidence consistent with the free cash flow hypothesis. Similar to Grullon and Michaely (2004) who examine firm performance and characteristics around share repurchases, the results of this study suggest that firms increase share repurchases to mitigate over-investment. In addition, our work contributes to the debate on how firms use windfall profits/cash flow (Blanchard, Lopez-de-Silanes, and Shleifer 1994; Bates 2005). We provide evidence that at least some of the cash brought back into the U.S. is not over-invested but is remitted to shareholders to alleviate potential agency concerns.

The remainder of the paper is organized as follows. Section 2 provides background on tax and accounting rules for foreign subsidiary earnings. Section 3 develops our hypotheses. Section 4 describes the analysis of aggregate Flow of Funds data, Section 5 describes the firm-level analysis of characteristics of repatriating firms and payout behavior, and Section 6 concludes.

2. Summary of Repatriation Taxes and the Tax Holiday

Under U.S. tax law, multinational firms pay taxes on foreign earnings upon repatriation of the earnings to the U.S. at a rate equal to the U.S. tax rate. The U.S. tax liability on dividend repatriations equals the dividend grossed up for foreign taxes paid times the U.S. tax rate. To reduce the potential for double taxation, the firm can decrease the U.S. tax liability by foreign taxes paid. This foreign tax credit is calculated on a world-wide basis for all foreign source income, rather than a country by country basis, and equals the lesser of the amount of foreign taxes paid on foreign income or U.S. taxes on foreign income. Therefore, a firm with an average foreign tax rate *greater* than the U.S. tax rate generally owes no U.S. taxes on repatriations of

foreign earnings. A firm with an average foreign tax rate *less* than the U.S. tax rate generally

owes U.S. taxes on repatriated earnings at a rate equal to the difference between the U.S. and

foreign tax rates.[7]

The Act was introduced in the House of Representatives on July 25, 2003, in the Senate

on September 18, 2003, and eventually signed by President Bush on October 22, 2004. The Act

creates a one-time tax incentive for U.S. multinational companies to remit foreign earnings to the

U.S. by reducing the U.S. tax rate on repatriations of foreign earnings. This reduced tax rate is

structured as an 85 percent dividends received deduction on eligible dividends received from

controlled foreign corporations in either 2004 or 2005. Because the maximum U.S. tax rate

during this period is 35 percent, the dividends received deduction reduces the maximum tax rate

on repatriations to 5.25 percent.

Though the Act originated as a measure to address the World Trade Organization's ruling

that export tax incentives in place at the time constituted an illegal export subsidy, Congress

added the temporary reduction in repatriation taxes to the bill as a means to increase jobs in the

United States. In accordance with this intent, the Act includes restrictions on the amount of funds

eligible for the dividends received deduction as well as on the intended use of the funds in the

United States.

First, the Act limits the amount eligible for the dividends received deduction to

extraordinary dividends, defined as the excess of repatriations during the year over the average

amount of repatriations during the previous five years, excluding the highest and lowest years.

All else equal, firms that have been systematically repatriating in the past will not benefit as

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[7] Because the foreign tax credit limitation is calculated on a world-wide basis, firms can use excess credits from high
tax rate countries to offset the U.S. tax liability on repatriations from low tax rate countries. The ability to cross-
credit creates an incentive to time repatriations from low tax rate countries to coincide with repatriations from high
tax rate countries. However, cross-crediting is limited by foreign tax credit baskets based on the type of income.
For a more detailed discussion of U.S. taxation of foreign income, see Scholes et al. (2005).

much under the Act as firms that have never repatriated. The Act further limits the eligible

dividend amount to the greater of (1) $500 million, (2) the earnings reported as permanently

reinvested on the last audited financial statements filed on or before June 30, 2003, or (3) if the

amount of permanently reinvested earnings (PRE) is not reported, the amount of U.S. tax

liability attributable to PRE reported in the last audited financial statements filed on or before

June 30, 2003, divided by 0.35.[8] The Act also reduces the amount eligible for the dividends

received deduction by any increase in related-party debt incurred by foreign subsidiaries between

October 3, 2004 and the close of the tax year for which the firm claims the dividends received

deduction.

Second, to be eligible for the dividends received deduction, the dividends must be paid in

cash and invested in the U.S. pursuant to a plan which is approved by the chief executive officer

or comparable officer and the board of directors and which provides for reinvestment of the

dividends in an approved use. Approved uses of the funds include, but are not limited to,

funding for hiring and training, infrastructure, research and development, capital investments,

and financial stabilization for purposes of job retention and creation. The Act only specifically

prohibits using repatriated funds for executive compensation and does not require firms to

demonstrate that repatriated funds are used for the purpose stated in the approved plan.[9]

However, subsequent guidance issued by the IRS, Notice 2005-10, lists dividends, share

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[8] Accounting Principals Board Opinion No. 23 (APB 23) defines PRE as the earnings of foreign subsidiaries that have been invested abroad indefinitely or that will be remitted in a tax-free liquidation. For financial reporting purposes, firms recognize the potential U.S. tax liability on foreign earnings when they report the foreign earnings, regardless of whether they repatriate the earnings to the U.S., resulting in a deferred tax liability in the amount of the potential U.S. taxes on future repatriations. However, if the firm deems the foreign earnings as PRE, it is not required to record a deferred tax liability or recognize income tax expense for the potential U.S. tax liability on future repatriations. If, or when, a firm changes its reinvestment plans and no longer considers the earnings indefinitely reinvested, it records an expense for the U.S. tax liability. See Collins, Hand, and Shackelford (2001) and Krull (2004) for a discussion of firms' decisions to designate foreign earnings as PRE.

[9] The temporary dividends received deduction is established in Internal Revenue Code Section 965. See Blessing (2004) and Stoffregen, Lainoff, and Satkoski (2005) for a more technical discussion of the Section 965 requirements and limitations.

repurchases, tax payments, and purchases of debt instruments or a less-than-ten percent interest

in a business entity as additional disallowed uses. The Notice states that tracing uses of the

repatriated funds would be too difficult to administer and that there is no requirement that

repatriated funds be used to incrementally increase spending for approved uses over amounts

spent for those purposes in previous years.[10]

The decision to repatriate foreign earnings under the Act affects firms' financial

statements through its effect on income tax expense and deferred tax liabilities. In the months

following the Act, many firms requested additional guidance to clarify the application of the new

tax laws including allowable uses of the repatriated funds and the calculation of the foreign tax

credit for repatriations eligible for the dividends received deduction. Because the application of

the law was unclear, the financial statement effects were also unclear. On December 21, 2004,

the Financial Accounting Standards Board (FASB) issued FASB Staff Position No. 109-2 (FSP

109-2) to provide accounting and disclosure guidance for amounts firms intend to repatriate

under the Act. FSP 109-2 requires firms that have not yet completed their evaluation of the

effect of the Act on their reinvestment plans to disclose a summary of the repatriation provision

as it applies to the firm, the effect on income tax expense for any amounts that will be repatriated

under the Act, the range of reasonably possible amounts still being considered for repatriation

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[10] Congress intensely debated the list of approved uses included in the Act and the need to trace whether firms ultimately use the funds for the purpose stated in the approved plan. On May 5, 2004, Senators Breaux and Feinstein introduced an amendment that would limit approved uses to wages, additions to capital accounts for property located within the U.S., research and development, and irrevocable contributions to a qualified employer plan. The amendment also included a provision that would require firms to trace where the money was spent and pay taxes and interest on any amounts not used for qualified expenditures. Senator Breaux defended this measure stating that the amendment "…is about responsibility and accountability, about creating jobs in this country, not stock buybacks that enrich a few at the expense of jobs in this country." (Congressional Record 2004) Opponents criticized the amendment by citing estimates that the tax holiday would generate 660,000 new jobs and stating that the narrow list of approved uses in the amendment would prevent firms from spending repatriated funds for job related expenses such as job training to upgrade skills, worker health, dental and hospital expenses, employee childcare, worker relocation reimbursements, and employee tuition assistance. (Congressional Record 2004b) The amendment was defeated, and the bill eventually enacted contains a non-exclusive list of approved uses but no requirement to trace the use of repatriated funds. See Alexander and Scholz (2008) for a summary of the Act's legislative history.

under the Act, and the range of income tax effects of such repatriation. For the period during which a firm completes its evaluation of the Act, FSP 109-2 requires it to report the total effect on income tax expense (or benefit) for amounts that have been repatriated under the Act.

3. Theory and Hypotheses

Hartman (1985) expresses the decision to invest abroad as a function of exogenous and constant foreign and domestic tax rates and risk-adjusted after-tax returns. In the analysis that follows, we first summarize Hartman (1985) then extend this analysis to incorporate the temporary tax holiday. Like Hartman, we assume that foreign and domestic after-tax returns on incremental investment projects, *rf* and *rd,* are exogenous and constant over time. Thus, any change in taxation on repatriation does not affect the return on the incremental investment opportunity. We also assume that the firm faces a cost of capital, r^*, which is exogenous and constant over time, and that viable investment projects must return at least the cost of capital, i.e., *rd*, $rf \geq r^*$. We further assume that domestic tax rates are higher than foreign tax rates. Though the converse may hold, firms with foreign tax rates greater than domestic tax rates are less likely to benefit from the reduction in the U.S. tax rate on repatriations.

If a firm invests an amount, *I*, overseas, the investment yields the following accumulation after n periods:

$$I[(1+rf)^n - 1] \tag{1}$$

wher*e rf* equals the risk-adjusted after-local-tax rate of return abroad.

For a firm with foreign earnings on an existing foreign investment, the repatriation decision requires a comparison of the after-all-taxes returns to reinvesting the foreign earnings abroad and repatriating to the United States. Allow *EP* to represent the cumulative amount of

foreign earnings on the initial investment (Equation (1)). At the beginning of the next period, the

firm decides whether to repatriate the earnings and invest them in the U.S. for n periods or

reinvest them in foreign operations and repatriate after n periods. If the firm repatriates the

earnings at the beginning of the period and invests the after-tax amount in the U.S. for n periods,

at the end of the investment horizon the firm has:

$$EP(1+rd)^n - \frac{EP}{(1-tf)}(td-tf)(1+rd)^n = \frac{EP(1-td)}{(1-tf)}(1+rd)^n, \qquad (2)$$

Where *td* equals the domestic tax rate, *tf* equals the foreign tax rate, *rd* equals the risk-adjusted

after-tax domestic rate of return, and *td > tf.*

If instead the firm leaves the earnings abroad and then repatriates after n periods it has:

$$EP(1+rf)^n - \frac{EP}{(1-tf)}(td-tf)(1+rf)^n = \frac{EP(1-td)}{(1-tf)}(1+rf)^n. \qquad (3)$$

A firm will repatriate at the beginning of the period when (2) > (3).[11] This relation simplifies to

a comparison of *rd* and *rf*. Thus, firms will repatriate foreign earnings when the domestic after-

tax rate of return exceeds the foreign after-local-tax return, and the U.S. tax on repatriations does

not influence the repatriation decision. (Hartman 1985; Scholes et al. 2005)

Although the theory suggests that repatriation taxes do not affect the repatriation

decision, existing studies show that dividend repatriations are sensitive to the tax cost of

repatriating (Hines and Hubbard 1990; Altshuler, Newlon, and Randolph 1995; Desai, Foley, and

Hines 2001; Altshuler and Newlon 1993; Grubert 1998). These studies argue that tax rates affect

repatriations due to a firm's ability to exploit temporary changes in the tax cost of repatriation by

timing repatriations from low-tax countries to coincide with repatriations from high-tax countries

(Clausing 2005). In this study, we investigate the effect of a temporary change in statutory tax

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[11] In Equations (2) and (3) *EP* is grossed up by the foreign tax rate because U.S. firms pay U.S. taxes on their local pre-tax income.

rates on repatriations, which is incremental to intra-firm, inter-temporal variation in the tax cost of repatriations.

We modify the Hartman (1985) analysis by incorporating the temporary effect of the Act on the tax cost of repatriating and by incorporating firms' ability to borrow. The Act allows a temporary 85 percent dividends received deduction for repatriations in 2004 or 2005. Therefore, the Act changes the decision to reinvest versus repatriate because tax rates are not constant over time: the U.S tax rate on repatriations is lower if the firm repatriates during the tax holiday than if the firm reinvests the profits abroad and repatriates later. We let tdo represent the U.S. tax on repatriations that benefit from the tax holiday.[12] Assuming that repatriations at the beginning of the period benefit from the tax holiday, if the firm repatriates at the beginning of the period then reinvests the after-tax amount in the U.S., at the end of n periods it has:

$$EP(1+rd)^n - \frac{EP}{(1-tf)}(tdo - tf)(1+rd)^n = \frac{EP(1-tdo)}{(1-tf)}(1+rd)^n, \quad (4)$$

where $tdo < td$. Notice that (4) is equivalent to (2) with tdo replacing td.

Because the tax holiday is not available when the firm reinvests its profits in the foreign country and repatriates after n periods, the amount the firm has if it repatriates after n periods is the same as Equation (3). The firm will repatriate at the beginning of the period as long as (4) > (3). Therefore, the firm will repatriate immediately taking advantage of the tax holiday when:

$$rd > (1+rf)\left[\frac{(1-td)}{(1-tdo)}\right]^{\frac{1}{n}} - 1. \quad (5)$$

If the firm has an available project, rd, that meets the criteria of (5), then it has an incentive to repatriate under the Act. However, an important caveat is that rd must equal or exceed $r*$ for

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[12] The following details the computation of tdo.

$$EP - \frac{EP}{1-tf}(td - tf) + \frac{.85 EP}{1-tf}(td - tf) = EP - \frac{.15 EP(td - tf)}{1-tf} = \frac{EP(1 - .85tf - .15td)}{1-tf}$$

So, $tdo = (.85tf + .15td)$

the firm to be willing to repatriate solely to invest in the United States. Said another way, the Act does not change the return on the incremental investment project, rd, but rather decreases the cost of repatriating funds. Therefore, existing shareholders receive a wind-fall gain through the increase in value attributable to the decrease in taxes on unremitted earnings previously impounded into price. However, in our model, this increase in value is not accompanied by a decrease in the firm's cost of capital, $r*$.[13]

This caveat is illustrated by the following. Assume that 1) if a firm has an investment opportunity it can borrow at rate i and invest in that project, where i equals the firm-specific after-tax cost of borrowing, and 2) the firm will invest in the project as long as the after-tax return is greater than the after-tax cost of borrowing.[14] In addition, assume that $i = r*$[15] and that there is no adverse selection component to i or $r*$. Because the firm did not repatriate prior to the Act, when tdo was equal to td, we can infer that $rd < rf$. Furthermore, as the firm did not borrow and invest in the incremental domestic investment opportunity, we can also infer that $rd < i$. Therefore, for a firm to consider repatriating under the Act, the following relation must hold:

$$i > rd > (1 + rf)\left[\frac{(1 - td)}{(1 - tdo)}\right]^{\frac{1}{n}} - 1. \tag{6}$$

Equation (6) implies that the return on the incremental project, rd, is also lower than $r*$.

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[13] For brevity, we assume that repatriating under the Act does not affect the cost of capital. This follows from our assumption that $r*$ is constant and exogenous. If we relax this assumption and allow repatriation to decrease the cost of capital, then repatriating under the Act will yield more potential investment projects having an rd that exceeds $r*$ thereby spurring investment. However, it is likely that this increase in investment is small relative to the amounts that were repatriated under the Act. Furthermore, the presence of increasing investment opportunities creates a conservative bias in our empirical tests.

[14] We assume that i is identical across all countries and that the firm always has the option to use its overseas assets to secure its borrowing.

[15] This relation assumes that capital structure is irrelevant to firm value. This relation also assumes that the cost of borrowing, i, is exogenous with respect to both the decision to repatriate and the decision to invest in the incremental project, i.e., that i is not dependent upon whether the incremental investment project is situated in the U.S or abroad. Furthermore, i is set independent of the shift in firms' capital structure that results from the borrowing. See Hines (1994) for a full equilibrium model of foreign investment that incorporates capital structure.

Notice that this relation implies that *rd* is low but not necessarily that *rf* is below *i*. As the investment horizon increases the term in brackets approaches one.[16] Therefore, if *rf* is greater than *i*, the firm will not repatriate but will invest in the foreign country. If *rf* is less than *i* then the firm's *EP* could be trapped overseas, creating an agency problem if this *EP* is either in cash or over-invested in foreign assets (Jensen 1986). Over-invested funds are, by definition, held in negative NPV projects, i.e. the return on investment is less than the discount rate.[17] De Waegenaere and Sansing (2008) show that for some firms the cost of holding funds abroad in negative net present value projects is less than the cost of repatriating them, even without the prospect of a tax holiday. Consistent with this theoretical result, Foley, Hartzell, Titman and Twite (2007) find that holdings of cash and cash equivalents in foreign subsidiaries are increasing in the tax cost of repatriation.

We investigate the extent to which repatriations under the Act are motivated by the need to disgorge excess cash trapped abroad. Our theory suggests that firms that take advantage of the tax holiday have limited investment opportunities in both the U.S. and abroad potentially leading to over-investment. That is, the expected return on each incremental project available to the firm is low and so firms that benefit from repatriation face costs associated with excess cash/over-investment. For these firms, the cost of repatriation under U.S. tax laws in effect before the Act exceeds the cost of over-investment. The tax holiday decreases the cost of repatriation, thus making repatriation cost-effective and creating the opportunity to bring home excess cash abroad. To investigate our conjecture, we test the following hypothesis:

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[16] Equation (6) does not preclude a firm from investing in a project identified prior to the ACJA but whose logistical requirements led to a time delay which permitted the use of funds ultimately repatriated under the act to fund the project.
[17] These funds could be invested in passive assets such as stocks and bonds, in which case the firm can continue to defer the U.S. taxes on these funds but cannot defer U.S. taxes on the earnings from the passive investments.

H₁: The likelihood that a firm repatriates under the Act is increasing in its over-investment concerns as evidenced by limited investment opportunities and high free cash flows.

Firms that benefit from the Act chose not to repatriate before the Act because domestic investment opportunities are limited ($rd \leq rf$). If domestic opportunities are limited, then repatriation of foreign funds does not eliminate the over-investment problem. When a firm's capital exceeds its investment opportunities, it can over-invest, retain the excess cash, or distribute the cash to its shareholders. Because firms can mitigate agency costs of over-investment by distributing excess cash to shareholders we predict the following:

H₂ₐ: Firms that repatriate under the Act abnormally increase shareholder distributions.

Repurchasing stock and paying dividends are the two primary methods for distributing excess capital. However, firms may prefer share repurchases for at least two reasons. First, unlike dividends, open market repurchases do not typically require commitment. Thus, once a firm repurchases, it is not expected to continue to repurchase on a regular basis (Guay and Harford 2000). Second, repurchases are tax-preferred. Though dividends and repurchases are both currently taxed at a 15 percent preferential rate, repurchases are taxed as capital gains, which dominate dividends from a tax perspective.[18] This leads us to our final hypothesis:

H₂ᵦ: Firms that repatriate under the Act abnormally increase share repurchases.

4. Aggregate Analysis of Repatriations and Shareholder Payouts

We first analyze the Flow of Funds data published by the Federal Reserve Board to document the effect of the Act on aggregate repatriation behavior relative to repatriations before

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[18] Capital gains dominate dividends from a tax perspective for at least four reasons. One, dividends accelerate the tax payment that could be deferred until the stock is sold (or fully avoided if held until the shareholder dies). Two, unlike dividends, shareholders can time the sale of an investment and thus pay the resulting capital gain tax when the shareholder's marginal tax rate is lowest. Three, with capital gains a portion of the proceeds is treated as a return of basis and thus goes untaxed. Conversely, basis cannot be used to avoid dividend income. Four, since only $3,000 of capital losses (net of capital gains) can be deducted each year, capital gains, unlike dividends, enable individuals to accelerate utilization of their pool of capital losses, an important consideration for many individuals following the downturn in the equity markets from 2000 to 2002.

the Act. The Flow of Funds data reports total dividends received by U.S. corporations from foreign subsidiaries. If firms increase repatriations during the tax holiday we expect a significant increase in dividends received from foreign subsidiaries after the Act. In Figure 1, we plot total dividends received from foreign subsidiaries (i.e., earnings repatriations) for each quarter from 1989 through 2005. Total dividends remains within the range of $5 billion to $15 billion for most quarters from the first quarter of 1989 through the fourth quarter of 2004, then increases to nearly $30 billion in the first quarter of 2005, $35 billion in the second quarter, $74 billion in the third quarter, and $65 billion in the fourth quarter. The mean quarterly dividends from foreign subsidiaries is $7.44 billion in 2003 and $8.98 billion in 2004, whereas in 2005 the mean quarterly dividends from foreign subsidiaries is $51.28 billion, a 471 percent increase from 2004 (t=3.79). As a percentage of gross domestic product (GDP) total dividends from foreign subsidiaries is 0.27 percent in 2003, 0.31 percent in 2004, and 1.63 percent in 2005. Thus, repatriations increase by 1.32 percent of GDP during the tax holiday.

Because we expect that firms that repatriate under the Act increase total payout, and in particular, share repurchases, in Figure 2 we show total quarterly share repurchases and total shareholder dividends from 1989 through 2005.[19] Both share repurchases and shareholder dividends increase steadily from 1995 through 2005. However, share repurchases begin a sharper increase in 2004 that continues through 2005. The mean quarterly share repurchases increases from $11.9 billion in 2003 to $17.1 billion in 2004, a 44 percent increase, and increases further to $28.4 billion in 2005, a 66 percent increase. The mean quarterly shareholder dividends

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[19] As described in Section 5.3, consistent with Fama and French (2001), we measure net repurchases as the change in treasury stock. If there is a net decrease in treasury stock, then we set the repurchases measure equal to zero. For those firms that do not use the treasury stock method, we estimate share repurchases as repurchases of common and preferred stock from the Statement of Cash Flows less the decrease in preferred stock from the Compustat Industrial Quarterly files and shareholder dividends as quarterly dividends per share times total shares outstanding from the Compustat Industrial Quarterly files. Consistent with the procedures we use to construct the sample in Section 5, we eliminate observations in the top 0.5 percent of dividends and share repurchases.

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increases from $11.8 billion in 2003 to $13.7 billion in 2004, a 16 percent increase, and increases further to $15.3 billion in 2005, a 12 percent increase. The increase in share repurchases from 2004 to 2005 is statistically significant (t=4.41), but the increase in dividends is not significant (t=1.15).[20]

Based on the aggregate data, dividends from foreign subsidiaries increase significantly after the Act. Share repurchases and shareholder dividends also increase significantly after the Act. However aggregate share repurchases and shareholder dividends include amounts for all firms regardless of whether they repatriate under the Act. Therefore, to formally investigate repatriation behavior around the Act, we use firm-level data to study characteristics of repatriating firms and whether changes in payout behavior differ between firms that repatriate under the Act and those that do not repatriate.

5. Firm-Level Analysis of Repatriation Plans and Shareholder Payouts

To investigate characteristics of repatriating firms and changes in payout behavior for repatriating versus non-repatriating firms, we construct a sample using the population of firms on Compustat with non-missing world-wide assets (Compustat data6) for 2001 through 2005 and non-missing foreign activity for the last three years.[21] From this sample, we eliminate firms with negative book values, firms incorporated outside of the U.S., and all insurance companies and financial services firms. We then review firms' FSP 109-2 disclosures about the financial statement effects of the Act to study the relation between repatriations under the Act and firms'

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[20] At least some portion of the increase in repurchases and dividends in our event period is attributable to the 2003 reduction in dividends and capital gains tax rates. However, we document a sharper increase in repurchases that corresponds more closely with the timing of the American Jobs Creation Act of 2004 than the Jobs and Growth Tax Relief Reconciliation Act of 2003. In our multivariate tests, we include a measure of changes in dividend and capital gain tax rates to control for the effect of this tax rate change on share repurchases.
[21] We eliminate firms that are missing foreign tax expense or foreign pre-tax earnings on Compustat in each of the prior three years.

payout behavior.[22] In the resulting sample of 2,696 firms that mention the Act in their SEC

reports, 357 repatriate under the Act in 2004 or 2005, and 2,339 state that they will not repatriate

under the Act or do not mention the tax holiday.

5.1. DESCRIPTIVE STATISTICS

We report summary statistics by repatriation intentions (repatriating or non-repatriating)

in Table 1. Firms in the repatriating sample are larger on average than firms in the non-

repatriating sample in terms of world-wide assets and market value. At the end of 2004, the

mean world-wide assets for the repatriating sample is $15.383 billion and the mean market value

of equity is $14.802 billion, whereas the mean world-wide assets for the non-repatriating sample

is $2.449 billion and the mean market value of equity is $2.086 billion. The repatriating sample

has a lower mean cash to asset ratio (0.177) than the non-repatriating sample (0.228). The mean

effective tax rate of the repatriating sample (0.294) is higher than the mean effective tax rate of

the non-repatriating sample (0.231) suggesting that the repatriating sample faces a greater tax

burden. For the repatriating sample, the mean amount the firms plan to or have repatriated (Total

Repatriation) is $833.14 million.

Table 2 uses the Fama and French (1997) industry classifications to show the industry

composition and ratio of cash to assets for repatriating and non-repatriating firms as of the end of

2004. Chips represents the greatest industry concentration in the repatriating sample whereas

Business Services is the largest category in the non-repatriating sample. We also report the ratio

of Total Repatriation to Cash (Rep/Cash) for the repatriating firms. The mean cash to asset ratio

is 0.18 for repatriating firms and 0.23 for non-repatriating firms. This higher ratio of cash to

assets for non-repatriating firms suggests that the decision to repatriate is affected by more than

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[22] See Section 2 for a detailed description of the disclosure requirements.

merely having large amounts of cash. Notably, anticipated repatriations reported by repatriating firms are more than 1.5 times the cash and short-term securities reported by these firms as of the end of 2004.[23]

5.2. CHARACTERISTICS OF REPATRIATING FIRMS

Our theory predicts that the firms that benefit from the Act are those that face costs associated with over-investment. Grullon and Michaely (2004) suggest that agency problems attributable to over-investment arise when firms transition from a high-growth to a low-growth stage. As growth opportunities diminish, free cash flows increase, and the likelihood of over-investment by management increases. Thus, these firms exhibit decreases in capital investment (R&D and capital expenditures) and increases in free cash flows. In the context of this study, we expect that firms that benefit from repatriating under the Act, and therefore decide to repatriate, are firms for which growth opportunities in both the U.S. and abroad are decreasing prior to the Act. Therefore, we anticipate that repatriating firms experience decreases in the returns to incremental investment, declines in capital investment and growth, and increases in free-cash flow in the years leading up to the Act. To test this prediction, we estimate the following equation using logistic regression:

$$Repatriate = \alpha_0 + \alpha_1 \Delta FPTI + \alpha_2 \Delta ROA + \alpha_3 \Delta MB + \alpha_4 \Delta RD + \alpha_5 \Delta CapEx + \alpha_6 FCF$$

$$+ \alpha_7 RateDum + \alpha_8 USTR + \alpha_9 \%FAssets \qquad (7)$$

Where *Repatriate* equals one if the firm states that it will repatriate (357 firms), and zero otherwise (2,339 firms) and each of the change variables (Δ) is the mean of the change in the

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[23] For illustrative purposes, consider Pfizer. In its 2005 financial statements, Pfizer disclosed that it planned to repatriate $37 billion under the provisions of the Act. However, its reported total cash and short-term investments was $19.893 ($22.226) billion as of the end of 2004 (2005).

firm's measure from 2002 to 2004. [24] *ΔROA* equals the change in net income scaled by average

world-wide assets; *ΔFPTI* equals the change in foreign pre-tax income scaled by average world-

wide assets; *ΔMB* equals the change in the firm's market to book value ratio; *ΔRD* equals the

change in the ratio of R&D to average world-wide assets; *ΔCapEx* equals the change in capital

expenditures divided by average world-wide assets; *FCF* equals average operating cash flows

divided by average world-wide assets from 2002 to 2004; *RateDum* equals one if the U.S.

statutory rate of 0.35 exceeds the average foreign tax rate from 2002 through 2004, and zero

otherwise; *USTR* equals the average U.S. tax rate from 2002 through 2004; *%FAssets* equals the

ratio of foreign assets to average world-wide assets.[25]

All variables, with the exception of *RateDum*, *%FAssets*, and the numerator in *ΔFPTI*,

use world-wide consolidated information. The use of world-wide consolidated information

represents a limitation in our data because we are not able, in general, to distinguish changes in

foreign activity from changes in domestic activity. However, our theory predicts that investment

opportunities are limited in both the U.S. and abroad. Therefore, the consolidated measures test

the combined effect of foreign and domestic investment opportunities on the probability that a

firm repatriates under the Act. As a robustness test, we estimate foreign return on assets and

domestic return on assets separately for a sub-set of firms in our sample that report foreign

segment sales, and estimate Equation (7) using these measures in place of *ΔFPTI* and *ΔROA*.

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[24] In calculating the average of the continuous variables from 2002 through 2004, we winsorize firm-year observations at the top and bottom 0.5%.

[25] Because few firms report foreign assets in the segment detail, we estimate foreign assets using the method described in Oler et al. (2007). Oler et al. (2007) decompose ROA into the product of the profit margin (Net Income/Sales) and the asset turnover ratio (Sales/Assets). Using foreign segment sales and assuming the asset turnover ratio is the same for domestic and foreign operations we can solve for foreign assets. In our main tests, we assume foreign assets equals zero for firms that do not report foreign segment sales. This allows us to include all of our 357 repatriating firms in the analysis. To control for the possibility that firms that do not report foreign segment sales have smaller foreign operations and are therefore less likely to repatriate, we repeat our main tests using only firms that report foreign segment sales.

H$_1$ predicts that the probability that a firm repatriates under the Act is higher for firms with limited investment opportunities in both the U.S. and abroad. To determine whether a firm has limited investment opportunities, we are interested in its incremental investment opportunities. The current period level of earnings as a percentage of assets includes earnings from previous, more profitable investments. However, if returns on incremental investments are low, this ratio will be decreasing as the firm makes investments in less profitable opportunities. Therefore, we study the change in earnings as a percentage of assets for foreign operations and the consolidated entity, *ΔFPTI* and *ΔROA*, to test whether firms' investment opportunities are limited. We expect negative coefficients on both of these variables.[26] *ΔMB* measures changes in investors' expectations about the firm's investment opportunities. Because market-to-book ratios are increasing in investment opportunities, we expect a negative coefficient on *ΔMB*. *ΔRD* and *ΔCapEx* measure changes in investment activity prior to the Act. We predict negative coefficients on these variables because we anticipate that repatriating firms experience decreases in investment opportunities in the years leading up to the Act. As we anticipate that repatriating firms have higher free cash flows than non-repatriating firms, we expect a positive coefficient on *FCF*. We include *RateDum* and *USTR* to capture the potential tax benefits of repatriating under the Act. Since firms with foreign tax rates greater than the U.S. tax rate generally do not benefit from the Act, we predict a positive coefficient on *RateDum*. *USTR* captures the firm's domestic tax burden. We anticipate a positive coefficient on this variable because firms with greater tax burdens will likely receive greater tax savings from repatriation under the Act. Finally, we include *%FAssets* to control for the size of foreign operations relative to the consolidated entity.

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[26] We deflate foreign earnings by average world-wide assets in our main tests because we would have to set this ratio to zero for firms that do not report foreign segment sales introducing a great deal of noise into the measure. We test the effect of changes in the ratio of foreign earnings to foreign assets and domestic earnings to domestic assets in a sensitivity test.

We expect that firms with larger foreign operations are more likely to have funds available to repatriate under the Act and therefore expect a positive coefficient on this variable.

Table 3 Panel A reports summary statistics for the variables in Equation (7) using the full sample of 357 repatriating and 2,339 non-repatriating firms. Mean repatriations as a percentage of world-wide assets is 11.6 percent.[27] Consistent with our prediction that repatriating firms have lower investment opportunities than non-repatriating firms, the mean $\Delta FPTI$ and ΔROA are significantly lower for repatriating firms (0.001 and 0.009, respectively) than for non-repatriating firms (0.011 and 0.017, respectively). Likewise, the mean ΔMB is significantly smaller for repatriating firms (-0.218) than for non-repatriating firms (0.077). Also consistent with our prediction, FCF is significantly higher for repatriating firms (0.120) than non-repatriating firms (0.054). However, inconsistent with our expectation that repatriating firms face decreasing capital investment, ΔRD and $\Delta CapEx$ are not significantly smaller for repatriating firms than for non-repatriating firms. The mean ΔRD is -0.001 (-0.000) for repatriating (non-repatriating) firms. The mean $\Delta CapEx$ is -0.004 for repatriating firms and -0.003 for non-repatriating firms.

Table 3 Panel B reports the univariate statistics for the 336 repatriating and 1,126 non-repatriating firms that report geographic segment sales. The only obvious difference between Panel A and Panel B is that *%FAssets* more than doubles for the non-repatriating sample (from 20.2 percent to 46.2 percent). All other comparisons across repatriating and non-repatriating firms are similar to Panel A. Thus, the results in Table 3 provide preliminary evidence that repatriating firms have lower investment opportunities and higher free cash flows than non-repatriating firms.

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[27] Seven firms in our sample state that they repatriate under the Act but do not report the amount of repatriation.

We report the tests of H_1 in Table 4 Panel A. In Column (1) we report the results of estimating Equation (7). Consistent with our hypothesis that the likelihood that a firm repatriates under the Act is higher for firms with limited investment opportunities, the coefficients on $\Delta FPTI$ and ΔROA are negative and significant. Also consistent with H_1, the coefficient on ΔMB is negative and significant. Because the market to book ratio represents investors' expectations about the future earnings of the firm, this result suggests that the likelihood of repatriation increases when the market anticipates declining investment opportunities. The coefficient on FCF is positive and significant consistent with H_1 suggesting that the probability of repatriation is increasing in free cash flows. However, the coefficients on ΔRD and $\Delta CapEx$ are insignificant, inconsistent with H_1. The coefficient on %FAssets is positive and significant, consistent with larger foreign operations yielding more earnings to repatriate.

In Columns (2) and (3) of Table 4, we estimate Equation (7) using a Tobit analysis with Total Repatriation divided by world-wide assets and Total Repatriation divided by lagged PRE as the dependent variables, respectively. The results are similar to those in Column (1) and suggest that the amount that firms repatriate under the Act is increasing in their over-investment concerns.[28]

To further ensure that our results are not driven by differences in the size of foreign operations, in Table 4 Panel B we estimate Equation (7) using only firms that report foreign segment sales. This data screen results in a sample of 1,462 firms with 336 repatriating firms and 1,126 non-repatriating firms. Results are consistent with those in Panel A. In Panel A, we

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[28] When we include the level of FPTI (scaled by world-wide assets) as a control for the size of foreign operations, inferences are unchanged. Results are also similar when we include world-wide assets as a control for size as in Grullon and Michaely (2004) and when we include the market-to-book ratio. However, in each of these tests, the coefficient on ΔMB becomes insignificant. In addition, results are similar when we replace *USTR* and *RateDum* with *TaxBurden*, defined as (max{U.S. taxes on foreign earnings (data273*0.35 less foreign taxes already paid(data64)), zero}), from Foley et al. (2007). Results are also not sensitive to including controls for the firm's industry.

include *ΔFPTI*, foreign pre-tax income divided by world-wide assets, to test whether firms with decreasing returns are more likely to repatriate. Because we deflate by world-wide assets, this variable is a potentially noisy measure of the foreign return on assets. For the sample used in Panel B, we can calculate foreign and domestic assets for 1,372 observations. In Column (3) we replace *ΔFPTI* and *ΔROA* with *ΔFROA* (the change in foreign return on assets) and *ΔUSROA* (the change in domestic return on assets). Consistent with H_1, the coefficients on each of these variables are negative and significant suggesting that firms with limited investment opportunities in both the U.S. and abroad, measured as decreasing returns to domestic and foreign investment, are more likely to repatriate during the tax holiday. Overall, the results in Tables 3 and 4 are consistent with the hypothesis that the probability of repatriation under the Act is increasing in firms' over-investment concerns. Next, we investigate whether repatriating firms attempt to mitigate this agency cost by distributing repatriated funds.

5.3. UNIVARIATE ANALYSIS OF CHANGES IN PAYOUT BEHAVIOR

In Tables 5 and 6 we compare quarterly share repurchases and shareholder dividends for the repatriating and non-repatriating samples. Table 5 reports the mean ratio of share repurchases to world-wide assets (*ShrRep*) and the total dollar amount of repurchases (*Total Repurchases*) by quarter beginning with the first quarter of 2003 through the fourth quarter of 2005 for the two sub-samples. Consistent with Fama and French (2001), we measure net repurchases as the change in treasury stock. If there is a net decrease in treasury stock, then we set repurchases equal to zero. For those firms that do not use the treasury stock method, we measure net repurchases as total repurchases from the statement of cash flows less decreases in preferred stock.

The repatriating sample has larger *ShrRep* than the non-repatriating sample. For the repatriating sample, *ShrRep* increases from 2.28 percent of assets in 2003, to 2.96 percent of assets in 2004, and 4.32 percent of assets in 2005, an increase in total repurchases of 2.04 percent of assets from 2003 to 2005. For firms in the non-repatriating sample, *ShrRep* increases from 0.97 percent of assets in 2003 to 1.35 percent of assets in 2004 and 1.75 percent of assets in 2005, an increase in share repurchases of 0.78 percent of assets from 2003 to 2005. This increase in repurchase activity for repatriating firms is consistent with an increase in payout behavior for firms planning to repatriate under the Act.

We investigate the dividend behavior of firms in the repatriating and non-repatriating samples in order to determine whether all payouts to shareholders generally increase over the period. In Table 6 we report the mean ratio of dividends to world-wide assets (*Dividends*) and *Total Dividends* for each sub-sample. We estimate dividends as quarterly dividends per share times the number of shares outstanding from the Compustat Industrial Quarterly files. Increases in dividends are more modest than the increases in repurchases. For the repatriating sample, *Dividends* increases from 1.29 percent of assets in 2003, to 1.61 percent of assets in 2004, and then decreases to 1.57 percent of assets in 2005, an increase in dividends of 0.28 percent of assets from 2003 to 2005. For the non-repatriating sample, *Dividends* increases from 1.51 percent of assets in 2003 to 1.63 percent of assets in 2004 and 2.11 percent of assets in 2005, an increase in total dividends of 0.60 percent of assets. Overall, the results in Tables 5 and 6 suggest that repatriating firms increase repurchases relative to non-repatriating firms but do not systematically increase dividends after the Act.

5.4. MULTIVARIATE TESTS OF CHANGES IN PAYOUT BEHAVIOR

We formally test whether changes in payout behavior are related to repatriations under the Act using the following empirical model[29]:

$$\Delta Payout_{i,t} = \beta_0 + \beta_1 PostAct_{i,t} + \beta_2 Repatriate_{i,t} + \beta_3 PostAct*Repatriate_{i,t}$$

$$+ \beta_4 Size_{i,t-1} + \beta_5 \Delta CapEx_{i,t-1} + \beta_6 \Delta ROA_{i,t} + \beta_7 ROA_{i,t} + \beta_8 Debt_{i,t-1} + \beta_9 DivYld_{i,t-1}$$

$$+ \beta_{10} \Delta Cash_{i,t-1} + \beta_{11} \Delta Penalty_t + \beta_{12} \Delta Payout_{i,t-4} + \gamma_k Industry_{i,k} + \theta_q Qtr_{i,q} + e_i \qquad (8)$$

Where $\Delta Payout$ equals the change in total dividends plus net share repurchases divided by world-wide assets from quarter t-4 to quarter t; *PostAct* is a dummy variable equal to one for all quarters beginning after the Act (i.e., the four quarters during 2005) and zero otherwise; *Repatriate* is a dummy variable equal to one for firms that state that they will repatriate under the Act, and zero otherwise; *Size* equals the log of market value of equity at the beginning of the quarter; *ΔCapEx* equals the change in the ratio of capital expenditures to world-wide assets from the beginning of quarter t-4 to the beginning of quarter t; *ΔROA* equals the change in the ratio of earnings to average world-wide assets from quarter t-1 to quarter t; *ROA* equals the ratio of annualized earnings to average world-wide assets in the current quarter. *Debt* equals the ratio of current plus long term debt to world-wide assets as of the beginning of the quarter; *DivYld* equals dividends per share divided by stock price at the end of the quarter; *ΔCash* equals the change in the ratio of cash and cash equivalents to world-wide assets from the beginning of quarter t-4 to the beginning of quarter t; *ΔPenalty* equals the change in the dividend tax penalty from quarter t-4 to quarter t; the dividend tax penalty equals the dividend tax rate minus the capital gain tax rate divided by one minus the capital gain tax rate from Poterba and Summers (1985); and *Industry* and *Qtr* are fixed effects.

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[29] Core, Guay, Richardson, and Verdi (2006) and Hribar, Jenkins, and Johnson (2006) use similar models to predict repurchase behavior.

The coefficient on *PostAct* measures whether changes in payout increase after the Act, and the coefficient on *Repatriate* measures whether changes are higher for repatriating firms than non-repatriating firms. We make no prediction for these coefficients. However, H$_{2a}$ predicts that repatriating firms increase payout more than non-repatriating firms after the Act. Therefore, we expect a positive coefficient on *PostAct*Repatriate* (β_3).

H$_{2b}$ predicts that because share repurchases, unlike dividend payments, do not require a commitment to make ongoing distributions, firms will prefer share repurchases to dividend payments as a means of distributing repatriated funds to shareholders. Thus, we expect that repatriating firms' share repurchases increase more than dividend payments after the Act. To test H$_{2b}$, we estimate Equation (8) using *ΔShrRep*, the change in the ratio of share repurchases to world-wide assets from quarter t-4 to quarter t, and *ΔDividends*, the change in the ratio of dividends to world-wide assets from quarter t-4 to quarter t, in turn as the dependent variable. We expect a positive coefficient on *PostAct*Repatriate* when *ΔShrRep* is the dependent variable. Furthermore, we anticipate that β_3 is lower in magnitude when *ΔDividends* is the dependent variable relative to when *ΔShrRep* is the dependent variable.

We also include variables that existing research finds to be significant determinants of repurchases and dividends. Dittmar (2000) predicts that firms are more likely to repurchase shares when the stock is undervalued and information asymmetry is high. Because Vermaelen (1981) predicts that information asymmetry between managers and investors is higher for small firms, Dittmar (2000) predicts that repurchases are decreasing in firm size. However, Dittmar (2000) and Core, Guay, Richardson, and Verdi (2006) find a positive relation between repurchases and size, and Barclay, Smith, and Watts (1995) find a positive relation between dividends and size. We expect a positive coefficient on *Size* because existing empirical evidence

suggests that large firms tend to make larger repurchases and pay more dividends. Existing

studies show that dividends and repurchases are increasing in profitability (Lintner 1956, Skinner

2008). To control for this effect, we include ΔROA and ROA. We expect a positive coefficient

on ROA but make no prediction for the coefficient on ΔROA. Consistent with Dittmar (2000) and

Core et al. (2006) we expect $Debt$ and $\Delta CapEx$ to be negatively related to repurchases. Because

we anticipate that shareholder payouts are increasing in the cash available for repurchases and

dividends, we expect a positive coefficient on $\Delta Cash$. In addition, we include $DivYld$ as a

measure of a firm's capacity to increase dividends. Firms with higher dividend yield have less

ability to increase dividends. $DivYld$ also controls for the substitutability of dividends and

repurchases (Grullon and Michaely 2002). We make no prediction for the coefficient on $DivYld$

when $\Delta Payout$ or $\Delta ShrRep$ is the dependent variable because it is unclear whether dividends are

a substitute or complement for repurchases. However, we expect $DivYld$ to be negatively related

to $\Delta Dividends$. $\Delta Penalty$ controls for the effect of dividend and capital gain tax rates on

dividends and share repurchases. We expect the dividend tax penalty to be positively related to

share repurchases and negatively related to dividends. Finally, the lagged values of changes in

the payout measures control for changes in payout levels before the Act, and we expect negative

coefficients on these variables.

Table 7 reports the descriptive statistics by quarter for our sample of 2,696 firms. The

mean log of market value of equity for this sample (*Size*) ranges from 5.652 to 5.681 across the

four quarters. The mean change in repurchases as a percent of assets ranges from 0.027 percent

to 0.037 percent and the mean change in dividends as a percent of assets ranges from 0.001 to

0.004 percent.

Table 8 includes the results from estimating Equation (8), the OLS estimation of the

relation between repatriation plans and changes in payout behavior. In Panel A, we report the

results using Compustat estimates of *ΔPayout*, *ΔDividends*, and *ΔShrRep*.[30] In Column (1),

where *ΔPayout* is the dependent variable, the coefficient on *PostAct* is positive and significant,

indicating that payout levels generally increase during 2005 consistent with Figure 2. The

coefficient on *Repatriate* is negative and significant, indicating that repatriating firms have

significantly lower changes in payout before the Act than non-repatriating firms. Consistent with

H_{2a}, the coefficient on *PostAct*Repatriate* is positive and significant (β_3=0.00281; t=4.44). This

result is consistent with our expectation that firms that repatriate under the Act have larger

increases in payout after the Act than firms that do not repatriate.

In Columns (2) and (3) of Table 8 we decompose *ΔPayout* into changes in dividends and

changes in share repurchases. In Column (2) we report the results using changes in dividends,

ΔDividends, as the dependent variable. As in Column (1), the coefficient on *PostAct* is positive

and significant, and the coefficient on *Repatriate* is negative but insignificant. The positive and

insignificant coefficient on *PostAct*Repatriate* (β_3=0.00004; t=0.27) suggests that firms that

repatriate under the Act do not significantly change their dividend policy around the Act.

When *ΔShrRep* is the dependent variable (Column (3)), the coefficient on *PostAct* is

positive and significant and the coefficient on *Repatriate* is negative and significant. The

positive and significant coefficient on *PostAct*Repatriate* (β_3=0.00277; t=4.28) is consistent

with H_{2b}.[31] This result suggests that firms that repatriate under the Act increase share

repurchases after the Act by 0.277 percent of world-wide assets more per quarter during 2005

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[30] All t-statistics are calculated using the Newey-West procedure to correct for heteroskedasticity and serial correlation. Results are similar when we calculate standard errors clustered by firm or time.
[31] In additional tests we include measures of stock option exercises to control for the possibility that firms repurchase shares to offset the dilutive effect of option exercises (Dittmar 2000). The coefficient on the stock option measure is not significant and including this variable does not affect inferences related to the variables of interest. We also include the market to book ratio as an additional control and find similar results. Results are also similar if we replace *ΔCash* with *FCF* as defined in Table 3.

than non-repatriating firms. We also estimate Equation (8) using the ratio of the amount

repatriated to world-wide assets in place of *Repatriate* and report the results in Column (4) of

Table 8. We find that the increase in repurchases for repatriating firms after the Act is positively

related to the amount the firm plans to repatriate.[32] Overall, the results suggest that repatriating

firms increase payout to shareholders after the Act by a larger amount than non-repatriating

firms, and the increase in payout results from an increase in share repurchases.

To determine the economic significance of the effect of the Act on share repurchases, we

multiply the coefficient on *PostAct*Repatriate* in Column (3) of Table 8 Panel A (0.00277) by

the world-wide assets of the 357 firms that state that they plan to repatriate ($5.492 trillion)

yielding the mean increase in repurchases per quarter for the four quarters of 2005. This

estimate suggests that repatriating firms increase net repurchases in 2005 by $60.85 billion more

than non-repatriating firms [(0.00277*$5,492*4)]. This figure represents 20.87 percent of the

total maximum amount of repatriations reported by the sample firms ($291.6 billion). However,

we use only four quarters after the Act to estimate the coefficient on *PostAct*Repatriate*. Most

firms have not yet completed spending the repatriated funds by the end of 2005.[33] Therefore,

this estimate is likely understated.

The results for the control variables in Table 8 are mixed. Consistent with our

expectations and existing literature, the coefficient on *Size* is positive and significant when

ΔPayout or *ΔShrRep* is the dependent variable, but is negative and significant when *ΔDividends*

is the dependent variable. The coefficient on *ΔCapEx* is negative as predicted, but is not

significant. Consistent with our predictions, the coefficient on *Debt* is negative and significant

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[32] Seven firms in our sample state that they repatriated under the Act, but do not provide an amount. When we eliminate these firms, the coefficient on *PostAct*MaxRep* is 0.0194.
[33] Redmiles (2008) suggests that 50% (70%) of the firms repatriating will have completed their investment of the repatriated funds by the end of 2006 (2007).

and the coefficient on $\Delta Cash$ is positive and significant for all payout measures. However, this finding is different from the results in Core et al. (2006) who find no significant relation between repurchases and cash holdings. The coefficient on ΔROA is negative and significant and the coefficient on ROA is positive and significant for all payout measures. The coefficient on $DivYld$ is negative and significant when $\Delta Payout$ or $\Delta ShrRep$ is the dependent variable, consistent with a substitution effect. The coefficient on $\Delta Penalty$ is negative and significant when $\Delta Dividends$ is the dependent variable and positive and significant when $\Delta ShrRep$ is the dependent variable, consistent with firms paying out more repurchases and less dividends when dividends are taxed at a higher rate relative to capital gains.

In Panel B of Table 8, we re-estimate Equation (8) using CRSP measures of $\Delta Payout$, $\Delta Dividends$, and $\Delta ShrRep$ as the dependent variable.[34] The results in Panel B are also consistent with our hypotheses. The coefficient on $PostAct*Repatriate$ is positive and significant for $\Delta Payout$ (β_3=0.00267; t=3.93) and for $\Delta ShrRep$ (β_3=0.00254; t=4.23) suggesting that repatriating firms increase repurchases after the Act by 0.254 percent of world-wide assets ($55.80 billion) more than non-repatriating firms. Thus, we estimate that 19.14 percent of the total repatriations reported by the sample firms [(0.00254*$5,492*4)/$291.6] are distributed as repurchases. Also consistent with the results in Panel A, when $\Delta Dividends$ is the dependent variable, the coefficient on $PostAct*Repatriate$ is not significant (β_3=0.00017; t=1.21), consistent with the prediction that firms increase share repurchases after the Act but do not significantly change their dividend policy.

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[34] We estimate $\Delta ShrRep$ using CRSP data by multiplying monthly decreases in shares outstanding by the end of the month stock price. We make corrections as described in Pontiff and Woodgate (2005) to eliminate repurchases attributable to errors in the CRSP data.

5.5 SENSITIVITY TESTS

Because the dependent variable of interest in our model, *Repatriate*, is a choice variable, our results potentially suffer from self-selection bias. Specifically, large, stable, profitable firms are more likely to repurchase shares because they have more free cash flow. These firms are also more likely to have large foreign operations and therefore more likely to repatriate under the Act. Our empirical specification uses a difference in differences approach which should mitigate this potential bias: The main effect for *Repatriate* controls for whether firms that repatriate have larger changes in repurchases over time, and *PostAct*Repatriate* tests whether, after controlling for other determinants of repurchases, repatriating firms have larger changes in repurchases after the Act than non-repatriating firms.

To further control for potential self-selection bias, we use a two step estimation procedure (Heckman 1979). We first estimate Equation (7) using a Probit regression. Because we use this procedure to correct for the possibility that large, profitable firms are both more likely to repatriate and more likely to repurchase shares, we also include world-wide assets, the average foreign pre-tax earnings divided by world-wide assets from 2001 to 2004, and the average consolidated return on assets from 2001 through 2004 in the probit equation. From this estimation we calculate the inverse Mills ratio and add it as an additional variable in Equation (8). Because we only observe the repatriation decision in 2005, we estimate Equation (8) using annual data for 2005.

We report the results of this two step procedure in Table 9. In this specification, the coefficient on *Repatriate* in Panel B tests whether firms that repatriate under the Act have larger changes in repurchases from 2004 to 2005 than non-repatriating firms. After correcting standard errors for correlation in errors between the two equations (Maddala 1983), we find that the

coefficient on Repatriate is 0.00978 (z=2.15). This result suggests that 18.4 percent of the total

amount of repatriations reported by the sample firms are distributed as repurchases

[(0.00978*5,492)/291.6]. Thus, we find similar results after correcting for self-selection bias.

Another alternative explanation for our results stems from Skinner's (2008) finding that,

over time, share repurchases are both increasing and replacing dividends as a method of paying

out corporate cash to shareholders. He also finds that more profitable firms make larger payouts

to shareholders. These empirical observations suggest that our results can be explained by firms

merely increasing their payout in conjunction with earnings increases. We control for this issue

in our primary model by including *Size*, *ΔROA*, and *ROA*. However, to further test whether our

results can be explained by earnings changes, we calculate abnormal share repurchases based on

a firm-specific payout ratio. We calculate the firm-specific payout ratio by estimating the

following relation by firm using years t-5 through t-1:

$$\Delta Payout_t = \gamma_0 + \gamma_1 ROA_t + \gamma_2 Payout_{t-1} + \eta_t, \tag{9}$$

where all variables are defined as in Equation (8) (Lintner 1956). We calculate abnormal

changes in payout as the current-year change in payout minus the predicted value from Equation

(9). We repeat the same process using share repurchases to estimate abnormal changes in share

repurchases. By using only the previous five years to estimate target payout ratios, we control for

increases in share repurchases over time. By estimating firm-specific target payout ratios, we

control for the possibility that increases in profitability explain our results.

We report the results using abnormal changes in share repurchases and abnormal changes

in payout as the dependent variable in Table 10 Columns (1) and (2). In both columns, the

coefficient on *PostAct*Repatriate* is positive and significant. In Column (1), the coefficient on

*PostAct*Repatriate* using abnormal changes in share repurchases as the dependent variable is

0.00219 which suggests that 16.5 percent of the total amount of repatriations reported by the sample firms are distributed as repurchases [(0.00219*$5,492*4)/$291.6]. Thus, we find similar results after controlling for increases in repurchases over time and firm-specific target payout ratios. In untabulated results, we estimate abnormal changes in repurchases and payout using the full sample period (1989 through 2005) to estimate firm-specific target payout ratios and find similar results.

We perform additional tests to determine the sensitivity of the results to the sample composition. Because the dependent variables, *ΔPayout*, *ΔDividends*, and *ΔShrRep*, include a large proportion of zeros, we investigate the sensitivity of our results to omitting observations that do not pay dividends or make share repurchases. We report the results of estimating Equation (8) without observations with a value of zero for *ΔShrRep* in Table 10 Column (3). The results are consistent with our hypotheses, and the magnitude of the coefficient on *PostAct*Repatriate* is similar to that reported in Table 8 (β_3 = 0.00254; t=2.26). To determine whether our results are driven by the inclusion of firms with small amounts of foreign activity, in Column (4) of Table 10 we report the results of estimating Equation (8) using only the 1,462 firms that report foreign segment sales. Once again, results are consistent with those reported in Table 8 (β_3 = 0.00229; t = 3.26).[35]

5.6. OTHER USES OF THE REPATRIATED FUNDS

The results in Table 8 suggest that increases in repurchases account for only 20.87 percent of the $292 billion that firms repatriate under the Act. To investigate other possible uses

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[35] We also investigate whether our results are affected by changes in the sample over time by estimating Equation (8) for a balanced panel of firms with data available for each quarter from 1989 through 2005. Results are similar to those reported in Table 8.

of the repatriated funds, we examine the statement of cash flows of repatriating firms to identify

how repatriated earnings are spent in 2005. If the entire $291.6 billion represents cash abroad

that is repatriated to the U.S. and then spent during 2005, we would expect to see a surge in the

net cash outflow of repatriating firms resulting in lower levels of cash. However, untabulated

data indicate that cash balances of repatriating firms increase between 2004 and 2005 ($818.4

billion and $941.4 billion, respectively). One explanation for this increase is that firms could

have converted foreign assets to cash for repatriation, but have not yet invested the remitted cash.

Another is that firms borrowed abroad to repatriate earnings but have not yet invested the cash.

Finally, higher levels of cash could be indicative of an increase in cash flows from operations.

To further explore how firms use repatriated funds, we examine payments by repatriating

firms for both allowed and disallowed uses of repatriated funds. Figure 3 illustrates cash inflows

and outflows on the firms' statements of cash flows including payments for repurchases,

dividends, acquisitions, investments, debt, property plant and equipment, currency translation

adjustments, R&D, and pension assets. Payments for acquisitions and R&D, allowed uses of

repatriated funds, decrease insignificantly during 2005, whereas payments for capital

expenditures (allowed) and dividends (disallowed) increase during 2005, but by insignificant

amounts. Debt *issuances* and currency translation adjustments significantly increase during 2005

but neither of these items represents significant uses of cash.   Therefore, Figure 3 implies that,

of all the possible uses of funds that we identify, only repurchases increase by a significant

amount in 2005. Further, the results in Table 8 suggest that, of the total $80 billion increase in

repurchases from 2004 to 2005, 75 percent ($60 billion) is attributable to the Act.[36]

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[36] Our findings are also consistent with repatriating firms continuing to hold their repatriated funds in reserve for spending in future periods. However, our review of the spending during 2006 does not provide evidence that investment spending has increased.

However, the results in Figure 3 must be interpreted with caution. We can only observe net cash flows at the consolidated level. If, for example, a firm repatriates under the Act and intends to use the remitted funds towards domestic rather than foreign R&D, the net R&D at the consolidated level would show no change. Note that share repurchases do not suffer from this limitation. To the extent that consolidated data suggest that repatriating firms use the funds to repurchase shares, repatriated earnings are not used for the activities listed by Congress and Treasury as approved uses.

6. Summary and Conclusion

On October 22, 2004 Congress passed the American Jobs Creation Act that provides a one-time 85 percent dividends received deduction on dividends received by U.S. multinational corporations from their foreign subsidiaries. The purpose of the Act is to encourage multinational firms to bring funds currently held in foreign subsidiaries back to the U.S. and use those funds to increase jobs and capital investment. However, our theory suggests that firms likely to repatriate under the Act are those with limited investment opportunities in both the U.S. and abroad. Therefore, under the assumptions of constant and exogenous tax rates, after-tax returns, and cost of capital, the optimal use of repatriated funds is to make shareholder distributions. Consistent with this prediction, we find that the likelihood that firms repatriate under the Act is decreasing in changes in return on assets and market to book ratios in the years preceding the Act, and increasing in free cash flows. Further, we find evidence that firms repatriating under the Act increase repurchases after the Act relative to non-repatriating firms but do not significantly increase dividend payments. Finally, we do not find evidence that spending on R&D, acquisitions, or property plant and equipment significantly increase during the period

subsequent to the Act. However, this result is subject to the limitation that we can only observe

cash outflows for these purposes on a world-wide basis.

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FIGURE 1
Net Quarterly Dividends from Foreign Subsidiaries

This figure graphs net quarterly dividends received by U.S. multinational corporations from foreign subsidiaries using the Federal Reserve Board Flow of Funds data. Amounts are the sum of net dividends received from foreign subsidiaries for each quarter from the first quarter of 1989 through the fourth quarter of 2005. Values on the y-axis are in $ millions.

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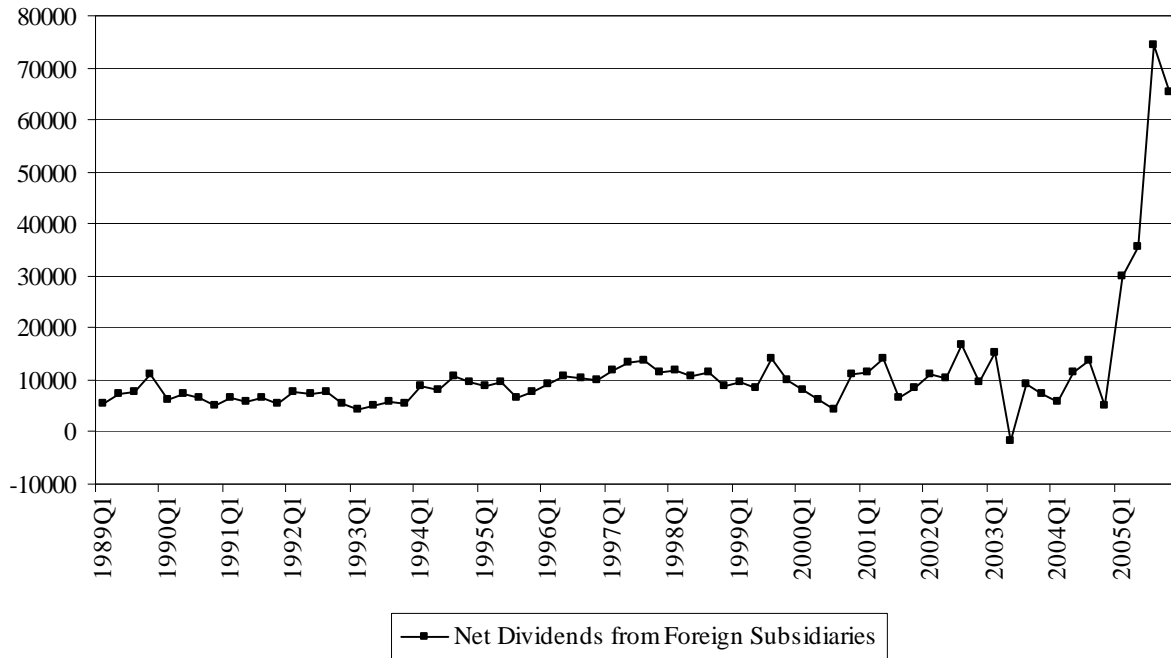
FIGURE 2
Total Quarterly Share Repurchases and Shareholder Dividends

This figure graphs total share repurchases and total shareholder dividends paid by sample firms from the first quarter of 1989 through the fourth quarter of 2005. The sample includes firms listed on Compustat, incorporated in the U.S. that have non missing foreign activity in at least one of the previous three years, excluding insurance companies and financial services firms and observations in the top 0.5 percent of the sample. Total Share Repurchases equals the sum of repurchases for sample firms for the quarter where repurchases equals the change in treasury stock (data226). If there is a net decrease in treasury stock, then repurchases equals zero. For those firms that do not use the treasury stock method, we estimate repurchases as repurchases of common and preferred stock from the Statement of Cash Flows less the decrease in preferred stock from the Compustat Industrial Quarterly files (data93 less the change in data51 and the change in data71). Total Shareholder Dividends equals total dividends paid by sample firms during the quarter where dividends equals dividends per share times the number of shares outstanding from the Compustat Industrial Quarterly files. Values on the y-axis are in $ millions.
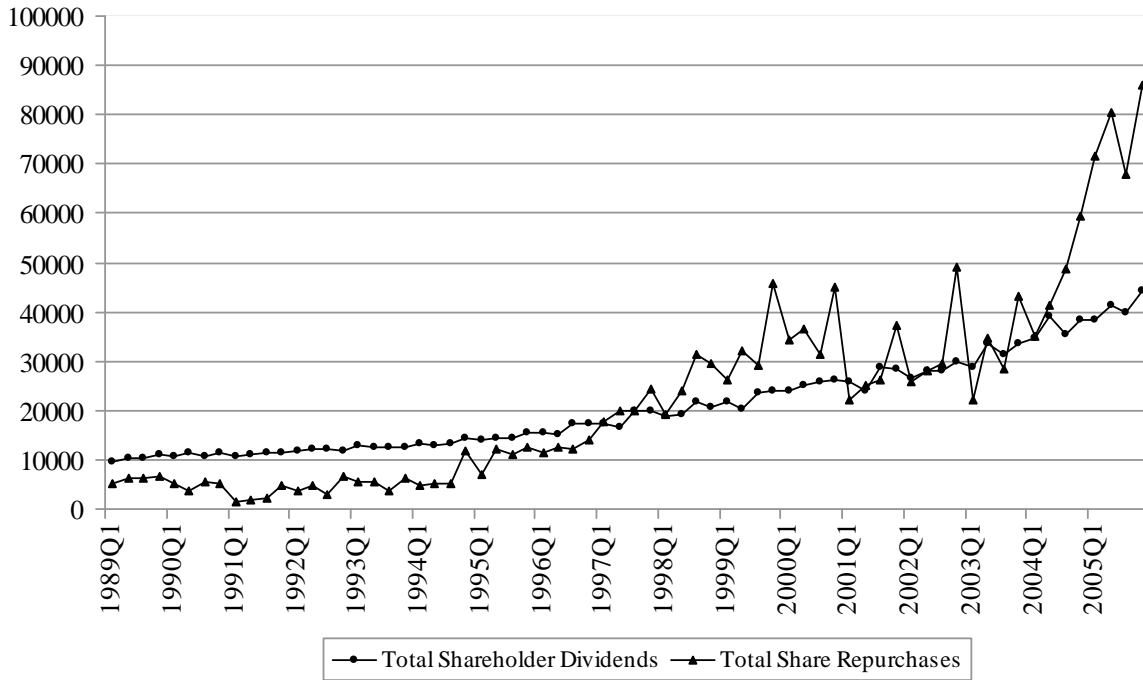
FIGURE 3
Changes in Cash Outflows for Repatriating Firms

Figure 3 reports changes in cash outflows for 357 firms that repatriate under the Act. *Dividends* are cash dividends as reported on the statement of cash flows (data127). *Repurchases* are purchases of common and preferred stock (data115). *Acquisitions* are as reported on the statement of cash flows (data129). *Net Capex* represents net capital expenditures defined as purchases of property, plant, and equipment less proceeds from the sale of property, plant, and equipment (data128 – data107). *RD* is research development defined as R&D plus advertising expenditures (data45 + data46). *Net Chg in Pension* represents the net change in net pension assets (data287 – data286 – (lagged data287 – lagged data286)). *Net Investments* represents purchases of marketable securities, investments in unconsolidated subsidiaries and other long-term investments less sales of these items (data113 – data109). *Net ST Investments* represents purchases of short-term marketable securities and other short-term investments less sales of these items (-data309). *Misc Investments* are net other cash inflows and outflows found in the investing section of the statement of cash flows (-data310). *Net LTD* is payments of long-term debt net of issuances (data114 – data111). *Net Current Debt* is payments of short-term debt net of issuances (-data301). *Stock Issuances* are sales and issuances of common and preferred stock (-data108). *Misc Financing* is net other cash inflows and outflows found in the financing section of the statement of cash flows (-data312). *FX Effects* are the exchange rate effects on cash balances as reported on the statement of cash flows (-data314). *Total Investment* is the sum of *Net Capex*, *Acquisitions*, *RD* and *Misc Investments*. Amounts are scaled by world-wide assets (data6).
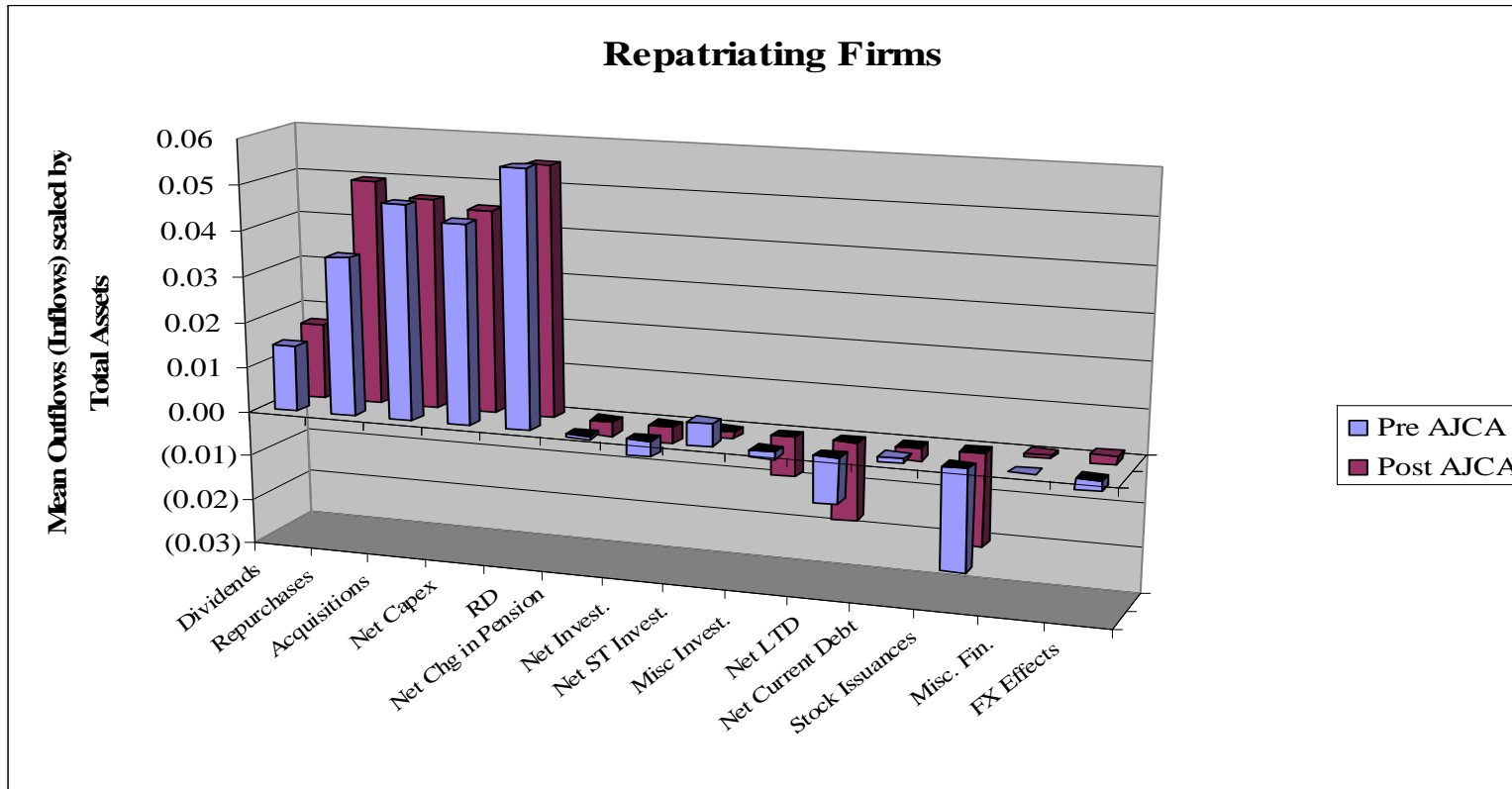
TABLE 1

Descriptive Statistics for the Lexis-Nexis Sample and the Compustat Sample

This table reports annual means and medians of descriptive data as of the end of 2004 for the samples of repatriating and non-repatriating firms. We include all firms with Compustat data available for the period 2001 to 2005, excluding firms with negative book values, firms incorporated outside the U.S, insurance companies, financial services firms, and firms with missing foreign activity in each of the last three years. Repatriating firms are those that state that they will repatriate under the Act. Non-repatriating firms those that either state that they will not repatriate under the Act or do not mention the tax holiday in their financial statements. *Assets* equals world-wide assets (data6). *MVE* is price per share (data199) times common shares outstanding in millions (data25). *Debt* is the ratio of long-term debt (data9) plus the debt included in current liabilities (data34) to world-wide assets (data6). *Cash* is cash and marketable securities (data1) scaled by world-wide assets (data6). *MB* is the ratio of the market value to book value ((data25*data199)/data60). *ROA* is net income (data172) scaled by world-wide assets (data6). *FPTI* is the ratio of foreign pre-tax income (data273) to world-wide assets (data6). *ETR* is the total effective tax rate measured as total tax expense (data16) over pre-tax income (data170). *USTR,* the U.S. effective tax rate, is domestic tax expense (data63) over domestic pre-tax income (data272). *FTR* is the foreign effective tax rate calculated as foreign tax expense (data64) over foreign pre-tax income (data273). *PRE* is the amount of permanently reinvested foreign subsidiary earnings reported in the income tax footnote. *Total Repatriation* is the amount the firm reports that it has or plans to repatriate under the provisions of the Act in its 2004 or 2005 10-K. Dollar amounts are in $ millions.

Variable	Repatriating Firms			Non-Repatriating Firms		
	N	Mean	Median	N	Mean	Median
Assets	357	15,382.55	2,486.74	2,339	2,449.38	280.95
MVE	357	14,801.79	3,395.84	2,339	2,085.55	337.80
Debt	357	0.216	0.202	2,339	0.197	0.141
Cash	357	0.177	0.117	2,339	0.228	0.131
MB	357	3.538	2.811	2,339	2.948	2.200
ROA	357	0.070	0.066	2,339	0.011	0.039
FPTI	357	0.042	0.030	2,339	0.006	0.000
ETR	357	0.294	0.302	2,339	0.231	0.290
USTR	357	0.184	0.101	2,339	0.052	0.000
FTR	357	0.220	0.207	2,339	0.081	0.000
PRE	280	1,136.78	153.15	N/A	N/A	N/A
Total Repatriation	350	833.14	152.50	N/A	N/A	N/A

TABLE 2
Sample Composition by Industry

This table provides the sample industry composition (Fama and Frech 1997) by repatriation status. Repatriating firms include firms that state that they will repatriate under the Act. Non-repatriating firms include firms that either state that they will not repatriate under the Act or do not mention the tax holiday in their financial statements. See Table 1 for additional sample selection criteria. *Cash* is total cash (data1) scaled by assets (data6). *Rep/Cash* is the amount the firm reports that it has or plans to repatriate scaled by total cash (data1).

Fama French		Repatriating Firms				Non-Repatriating Firms	
Industries	N	%	Cash	Rep/Cash	N	%	Cash
Agriculture	0	N/A	N/A	N/A	10	0.43%	0.19
Food	10	2.80%	0.08	1.7	34	1.45%	0.11
Soda	1	0.28%	0.01	10.32	5	0.21%	0.08
Beer	4	1.12%	0.12	2.36	7	0.30%	0.15
Smoke	2	0.56%	0.11	0.54	1	0.04%	0.12
Toys	5	1.40%	0.22	1.19	17	0.73%	0.16
Fun	1	0.28%	0.04	0.19	35	1.50%	0.15
Books	1	0.28%	0.12	0.31	26	1.11%	0.15
Household	12	3.36%	0.09	2.08	29	1.24%	0.15
Clothes	10	2.80%	0.21	0.73	37	1.58%	0.14
Health	9	2.52%	0.14	0.57	119	5.09%	0.24
Med Eq	17	4.76%	0.2	1.07	85	3.63%	0.28
Drugs	25	7.00%	0.23	1.14	147	6.28%	0.56
Chemicals	20	5.60%	0.05	4.34	30	1.28%	0.15
Rubber	5	1.40%	0.07	1.44	15	0.64%	0.06
Textiles	3	0.84%	0.05	1.09	9	0.38%	0.15
Bldg Mat	10	2.80%	0.07	0.63	43	1.84%	0.16
Construction	1	0.28%	0.03	0.29	38	1.62%	0.14
Steel	7	1.96%	0.07	2.48	30	1.28%	0.06
Fab Pr	0	N/A	N/A	N/A	7	0.30%	0.04
Machinery	19	5.32%	0.11	1.75	81	3.46%	0.18
Electrical Eq	8	2.24%	0.14	0.99	41	1.75%	0.20
Misc	4	1.12%	0.04	0.7	14	0.60%	0.36
Autos	10	2.80%	0.1	1.49	26	1.11%	0.13
Aero	7	1.96%	0.07	0.68	10	0.43%	0.06
Ships	0	N/A	N/A	N/A	7	0.30%	0.14
Defense	0	N/A	N/A	N/A	5	0.21%	0.10
Gold	0	N/A	N/A	N/A	4	0.17%	0.15
Mines	1	0.28%	0.06	0.94	6	0.26%	0.16
Coal	0	N/A	N/A	N/A	2	0.09%	0.08
Energy	16	4.48%	0.09	4.88	80	3.42%	0.12
Utilities	1	0.28%	0.02	1.12	33	1.41%	0.04
Telecom	2	0.56%	0.03	0.24	65	2.78%	0.17
Personal Svcs	1	0.28%	0.26	0.13	15	0.64%	0.07
Business Svcs	31	8.68%	0.35	0.56	267	11.42%	0.34
Computers	18	5.04%	0.36	0.41	102	4.36%	0.40
Chips	34	9.52%	0.32	0.48	176	7.52%	0.36
Lab Eq	13	3.64%	0.18	1.38	75	3.21%	0.30
Paper	10	2.80%	0.07	9.62	24	1.03%	0.08
Boxes	4	1.12%	0.04	1.27	4	0.17%	0.04
Transport	2	0.56%	0.28	0.57	67	2.86%	0.11
Wholesale	7	1.96%	0.06	0.43	98	4.19%	0.11
Retail	17	4.76%	0.19	0.53	147	6.28%	0.13
Meals	3	0.84%	0.04	2.48	54	2.31%	0.10
Real Estate	0	N/A	N/A	N/A	20	0.86%	0.13
Fin	6	1.68%	0.27	2.68	192	8.21%	0.14
Total	**357**		**0.18**	**1.66**	**2339**		**0.23**

Table 3
Incentives to Repatriate

Total Repatriation/Assets is the ratio of the amount the firm reports that it has repatriated or plans to repatriate in $ millions to world-wide assets (data6). Each of the change variables (Δ) is the mean of the change in the firm's measure over the three-year period 2002 to 2004. *ΔFPTI* equals the change in foreign pre-tax income (data273) scaled by world-wide assets (data6); *ΔROA* is the change in net income (data172) scaled by world-wide assets (data6); *ΔMB* equals the change in the firm's market to book value ratio ((data25*data199)/data60); *ΔRD* equals the change in the ratio of R&D to world-wide assets; *ΔCapEx* equals the change in capital expenditures (data128) divided by world-wide assets; *FCF* equals average operating cash flows (data308) divided by world-wide assets for the period 2002 to 2004; *RateDum* equals one if the U.S tax rate of 0.35 exceeds the average foreign tax rate (data64/data273) from 2002 through 2004, and zero otherwise; and *USTR* equals the average U.S. tax rate (data63/data272) from 2002 through 2004. *%FAssets* is the ratio of *FAssets* (foreign assets estimated as described in Oler et al. (2007)) to world-wide assets (data6). *ΔFROA* is the change in foreign ROA where *FROA* is estimated using the process described in Oler et al (2007). *ΔUSROA* is change in domestic ROA where *USROA* is *ROA* less *FROA*. Repatriating firms include firms that state that they will repatriate under the Act. Non-repatriating firms include firms that either state that they will not repatriate under the Act or do not mention the tax holiday in their financial statements. The sample in Panel A includes the 2,696 firms described in Table 1. The sample in Panel B is only firms with non-missing foreign segment sales information. All continuous variables are winsorized at the top and bottom 0.5 percent. ***, **, * indicates significantly different from the repatriating sample at the 1 percent, 5 percent and 10 percent level, respectively.

Panel A: Full Sample

	Repatriating Firms			Non-Repatriating Firms		
	N	Mean	Median	N	Mean	Median
Total Repatriation/Assets	350	0.116	0.076	2,339	N/A***	N/A
ΔFPTI	357	0.001	0.000	2,339	0.011**	0.000
ΔROA	357	0.009	0.006	2,339	0.017**	0.004
ΔMB	357	-0.218	-0.011	2,339	0.077***	0.101
ΔRD	357	-0.001	0.000	2,339	-0.000	0.000
ΔCapEx	357	-0.004	-0.002	2,339	-0.003	0.000
FCF	357	0.120	0.115	2,339	0.054***	0.072
RateDum	357	0.642	1.00	2,339	0.217***	0
USTR	357	0.165	0.069	2,339	0.051***	0
FAssets	357	4,885.070	725.852	2,339	415.270***	0
%FAssets	357	0.438	0.398	2,339	0.202***	0

Panel B: Firms with Non-missing Foreign Segment Sales

	Repatriating Firms			Non-Repatriating Firms		
	N	Mean	Median	N	Mean	Median
Total Repatriation/Assets	330	0.124	0.082	1,126	N/A	N/A
ΔFPTI	336	-0.031	0.015	1,126	0.001*	0.000
ΔROA	336	-0.002	-0.001	1,126	0.010**	-0.000
ΔFROA	331	0.014	0.005	1,041	0.009	0.000
ΔUSROA	331	-0.002	-0.001	1,041	0.018***	0.005
ΔMB	336	-0.386	-0.014	1,126	-0.148***	0.042
ΔRD	336	-0.001	0.000	1,126	-0.001	0.000
ΔCapEx	336	-0.004	-0.003	1,126	-0.005	-0.003
FCF	336	0.120	0.115	1,126	0.055***	0.067
RateDum	336	0.628	1.000	1,126	0.384***	0.000
USTR	336	0.170	0.164	1,126	0.087***	0.001
FAssets	336	4858.52	874.25	1,126	851.55***	97.62
%FAssets	336	0.480	0.438	1,126	0.462	0.376

TABLE 4
Characteristics of Repatriating Firms

Column (1) reports the results of estimating a logit model where the dependent variable, *Repatriate*, is equal to one if the firm states that it will repatriate under the Act, and zero otherwise. Columns (2) and (3) report the results of estimating a tobit model where the dependent variables are Total Repatriation divided by world-wide assets or lagged PRE. Total Repatriation equals the amount the firm states that it repatriated or plans to repatriate under the Act; PRE equals the amount the firm discloses as permanently reinvested earnings in the income tax footnote. Each of the change variables (Δ) is the mean of the change in the firm's measure over the three-year period 2002 to 2004. $\Delta FPTI$ equals the change in foreign pre-tax income (data273) scaled by world-wide assets (data6); ΔROA is the change in net income (data172) scaled by world-wide assets (data6); ΔMB equals the change in the firm's market to book value ratio ((data25*data199)/data60); ΔRD equals the change in the ratio of R&D to world-wide assets; $\Delta CapEx$ equals the change in capital expenditures (data128) divided by world-wide assets; *FCF* equals average operating cash flows (data308) divided by world-wide assets for the period 2002 to 2004; *RateDum* equals one if the U.S tax rate of 0.35 exceeds the average foreign tax rate (data64/data273) from 2002 through 2004, and zero otherwise; and *USTR* equals the average U.S. tax rate (data63/data272) from 2002 through 2004. *%FAssets* is the ratio of *FAssets* (foreign assets estimated as described in Oler et al. (2007)) to world-wide assets (data6). $\Delta FROA$ is the change in foreign ROA where *FROA* is estimated using the process described in Oler et al. (2007). $\Delta USROA$ is change in domestic *ROA* where *USROA* is *ROA* less *FROA*. The sample in Panel A includes the 2,696 firms described in Table 1. The sample in Panel B is only firms with non-missing foreign segment sales information. All continuous variables are winsorized at the top and bottom 0.5 percent.

Panel A: Full Sample

Variable	Predicted Sign	(1) Repatriate		(2) Total Repatriation/Assets		(3) Total Repatriation/PRE	
		Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
Intercept		-3.96	-24.45	-0.45	-18.66	-5.83	-16.63
ΔFPTI	-	-0.42	-1.96	-0.04	-1.84	-0.30	-0.96
ΔROA	-	-3.26	-1.80	-0.42	-2.11	-4.19	-1.55
ΔMB	-	-0.09	-1.69	-0.01	-2.19	-0.15	-1.95
ΔRD	-	2.56	0.34	0.28	0.34	-1.76	-0.16
ΔCapEx	-	0.79	0.17	-0.04	-0.09	4.28	0.61
FCF	+	7.15	8.68	0.83	9.30	8.18	6.52
RateDum	+	1.92	10.29	0.21	10.47	2.41	8.37
USTR	+	2.19	4.52	0.21	4.15	2.86	4.02
%FAssets	+	1.26	6.10	0.15	6.77	1.73	5.80
Scale				0.19		2.53	
Log Likelihood		-793.77		-373.49		-1042.94	
N		**2,696**	**Rep = 357**	**2,689**	**Rep = 350**	**2,624**	**Rep = 285**

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Panel B: Firms with Non-missing Foreign Segment Sales

Variable	Predicted	(1) Repatriate		(2) Total Repatriation/Assets		(3) Repatriate	
		Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
Intercept		-2.85	-15.12	-0.35	-14.53	-2.70	-14.16
ΔFPTI	-	-0.40	-1.89	-0.04	-1.78		
ΔROA	-	-3.70	-1.92	-0.50	-2.29		
ΔUSROA	-					-2.42	-1.91
ΔFROA	-					-2.44	-1.67
ΔMB	-	-0.08	-1.63	-0.01	-2.24	-0.08	-1.45
ΔRD	-	2.13	0.28	0.19	0.22	3.23	0.43
ΔCapEx	-	2.30	0.45	0.03	0.05	1.33	0.25
FCF	+	7.68	8.30	0.96	9.27	7.64	8.07
RateDum	+	1.32	6.91	0.16	7.85	1.31	6.71
USTR	+	1.55	3.18	0.15	2.78	1.46	2.97
%FAssets	+	0.11	0.49	0.03	1.32	0.07	0.33
Scale				0.19			
Log Likelihood		-672.25		-292.85		-652.88	
N		**1,462**	**Rep = 336**	**1,456**	**Rep = 330**	**1,372**	**Rep = 331**

TABLE 5
Total Repurchases for Partitions Based on Repatriation Plans

This table reports mean repurchases as a percent of assets and total repurchases by quarter for repatriating and non-repatriating firms. Repatriating firms are those that state that they will repatriate under the Act in fiscal year 2004 or 2005. Non-repatriating firms are those that state that they will not repatriate under the Act or do not mention the tax holiday. *ShrRep* is repurchases as a percent of assets measured as the change in treasury stock (data226) scaled by world-wide assets (data44) then multiplied by 100. If there is a net decrease in treasury stock, then repurchases equals zero. For those firms that do not use the treasury stock method, we estimate share repurchases as repurchases of common and preferred stock from the statement of cash flows (data93) less decreases in preferred stock (change in data55 and data71). *Total Repurchases* are the unscaled repurchases reported in $ millions. We eliminate observations in the top 0.5 percent of *ShrRep*.

Period	Repatriating Firms			Non-Repatriating Firms		
	N	ShrRep (Mean in %)	Total Repurchases	N	ShrRep (Mean in %)	Total Repurchases
2003: Q1	357	0.64	12,782.7	2,335	0.30	9,631.2
2003: Q2	357	0.48	16,456.4	2,337	0.23	8,701.7
2003: Q3	357	0.56	17,931.6	2,335	0.20	11,571.7
2003: Q4	357	0.60	25,064.4	2,337	0.25	15,232.8
2003 Total		*2.28*	*72,235.1*		*0.97*	*45,137.4*
2004: Q1	356	0.65	22,631.3	2,337	0.30	14,727.8
2004: Q2	357	0.69	21,509.2	2,336	0.32	19,880.2
2004: Q3	357	0.89	28,619.1	2,337	0.38	20,299.1
2004: Q4	357	0.72	28,041.9	2,338	0.36	23,532.6
2004 Total		*2.96*	*100,801.5*		*1.35*	*78,439.7*
2005: Q1	356	0.92	33,450.8	2,338	0.35	23,563.5
2005: Q2	357	1.07	42,086.8	2,336	0.48	27,089.6
2005: Q3	356	1.18	40,289.6	2,329	0.42	27,639.3
2005: Q4	357	1.15	50,579.9	2,326	0.50	33,375.0
2005 Total		*4.32*	*166,407.1*		*1.75*	*111,667.4*

TABLE 6
Total Dividend Payments for Partitions Based on Repatriation Plans

This table reports mean repurchases as a percent of assets and total repurchases by quarter for repatriating and non-repatriating firms. Repatriating firms are those that report in their financial statements that they will repatriate under the Act in fiscal year 2004 or 2005. Non-repatriating firms are those that state that they will not repatriate under the Act or do not mention the tax holiday. *Dividends* equals dividends as a percent of assets calculated as quarterly dividends per share times total shares outstanding (data16*data61), divided by world-wide assets (data44) then multiplied by 100. *Total Dividends* is dividends per share times total shares outstanding (data16*data61), in $ millions. We eliminate observations in the top 0.5 percent of *Dividends*.

Period	Repatriating Firms			Non-Repatriating Firms		
	N	Dividends (Mean in %)	Total Dividends	N	Dividends (Mean in %)	Total Dividends
2003: Q1	357	0.27	16,495.7	2,333	0.24	11,545.7
2003: Q2	357	0.28	16,792.3	2,334	0.36	12,803.6
2003: Q3	357	0.37	16,862.7	2,334	0.48	13,741.1
2003: Q4	357	0.37	21,302.6	2,338	0.44	14,735.4
2003 Total		*1.29*	*71,453.3*		*1.51*	*52,825.8*
2004: Q1	357	0.30	17,655.5	2,337	0.36	14,479.2
2004: Q2	357	0.45	18,571.4	2,336	0.43	14,992.0
2004: Q3	357	0.34	19,782.7	2,335	0.39	16,527.0
2004: Q4	357	0.52	54,998.7	2,339	0.45	16,675.3
2004 Total		*1.61*	*111,008.3*		*1.63*	*62,673.6*
2005: Q1	357	0.45	21,880.9	2,337	0.44	16,159.8
2005: Q2	356	0.34	21,408.6	2,336	0.52	17,980.2
2005: Q3	356	0.33	21,069.4	2,328	0.48	17,869.7
2005: Q4	357	0.46	25,209.2	2,326	0.66	19,598.7
2005 Total		*1.57*	*89,568.1*		*2.11*	*71,608.4*

TABLE 7
Sample Descriptive Statistics

The sample includes firm-quarters from the first quarter of 1989 to the fourth quarter of 2005 with data available to calculate all regression variables, excluding firms incorporated outside the U.S., financial services firms, insurance companies, firms with no foreign activity in the previous three years, and firms with negative book values. $\Delta Payout$ is the sum of $\Delta ShrRep$ and $\Delta Dividends$. $\Delta ShrRep$ is the quarterly change in treasury stock (data226) scaled by world-wide assets (data44). If there is a net decrease in treasury stock, then repurchases equals zero. For those firms that do not use the treasury stock method, we estimate share repurchases as repurchases of common and preferred stock from the statement of cash flows (data93) less decreases in preferred stock (change in data55 and data71). *Dividends* is the change from quarter t-4 to quarter t in dividends per share times total shares outstanding (data16 * data61)) scaled by world-wide assets (data44). *MaxRep* is the amount the firm reports that it has repatriated or plans to repatriate divided by world-wide assets. *PostAct* equals one for the four quarters of 2005, zero otherwise. *Repatriate* equals one if the firm states that it will repatriated under to the Act. *Size* is the log of the market value of equity. Market value of equity equals price (data14) times common shares outstanding (data61). $\Delta CapEx$ is the change in the ratio of capital expenditures (data90) to world-wide assets (data44) from the beginning of quarter t-4 to the beginning of quarter t. ΔROA is the change in the ratio of annualized net income (data69*4) to world-wide assets (data44) from quarter t-1 to quarter t. *ROA* is the ratio of annualized net income (data69*4) to world-wide assets (data44). *Debt* is the ratio of long-term debt (data51) plus the debt included in current liabilities (data45) to world-wide assets (data44). *DivYld* is dividends per share (data16) scaled by price (data14). $\Delta Cash$ is the change in the ratio of cash and cash equivalents (data36) to world-wide assets (data44) from the beginning of quarter t-4 to the beginning of quarter t. $\Delta Penalty$ equals the change in the dividend tax penalty from quarter t-4 to quarter t and the dividend tax penalty equals the dividend tax rate minus the capital gain tax rate divided by one minus the capital gain tax rate.

	QTR1		QTR2		QTR3		QTR4	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
N	28,171	28,171	28,921	28,921	29,192	29,192	29,280	29,280
ΔPayout	0.00027	0.00000	0.00039	0.00000	0.00032	0.00000	0.00036	0.00000
ΔShrRep	0.00027	0.00000	0.00035	0.00000	0.00029	0.00000	0.00037	0.00000
ΔDividends	0.00001	0.00000	0.00004	0.00000	0.00002	0.00000	0.00002	0.00000
MaxRep	0.04296	0.00000	0.04454	0.00000	0.04331	0.00000	0.04079	0.00000
PostAct	0.09517	0.00000	0.09267	0.00000	0.09201	0.00000	0.09177	0.00000
Repatriate	0.15811	0.00000	0.15992	0.00000	0.15905	0.00000	0.15881	0.00000
Size	5.65191	5.60495	5.65372	5.59172	5.68094	5.63616	5.66595	5.61139
ΔCapEx	-0.00083	0.00000	-0.00078	0.00000	-0.00077	0.00000	-0.00071	0.00000
ΔROA	0.00683	-0.00328	0.01293	0.00642	-0.00196	0.00014	-0.01368	-0.00070
ROA	0.01145	0.03843	0.02407	0.04791	0.02110	0.04698	0.00695	0.04629
Debt	0.21363	0.18376	0.21807	0.18988	0.21782	0.19001	0.21733	0.18958
DivYld	0.00287	0.00000	0.00278	0.00000	0.00280	0.00000	0.00271	0.00000
ΔCash	-0.00095	0.00009	-0.00034	0.00005	-0.00071	0.00004	-0.00076	0.00000
ΔPenalty	-0.01522	0.00000	-0.01354	0.00000	-0.01329	0.00000	-0.01333	0.00000

TABLE 8
Regression Analysis of Changes in Total Payout, Repurchases, and Dividends around the Act

The sample includes firm-quarters from the first quarter of 1989 to the fourth quarter of 2005 with data available to calculate all regression variables, excluding firms incorporated outside the U.S., financial services firms, insurance companies, firms with no foreign activity in the previous three years, and firms with negative book values. $\Delta Payout$ is the sum of $\Delta ShrRep$ and $\Delta Dividends$. $\Delta ShrRep$ is the change from quarter t-4 to quarter t in repurchases measured as the change in treasury stock (data226) scaled by world-wide assets (data44). If there is a net decrease in treasury stock, then repurchases equals zero. For those firms that do not use the treasury stock method, we estimate share repurchases as repurchases of common and preferred stock from the statement of cash flows (data93) less decreases in preferred stock (change in data55 and data71). $\Delta Dividends$ is the change from quarter t-4 to quarter t in dividends per share times total shares outstanding (data16 * data61)) scaled by world-wide assets (data44). *PostAct* equals one for the four quarters of 2005, zero otherwise. *Repatriate* equals 1 if the firm states that it will repatriate under to the Act. *MaxRep* is the amount the firm reports that it has repatriated or plans to repatriate divided by world-wide assets. *Size* is the log of the market value of equity. Market value of equity equals price (data14) times common shares outstanding (data61). $\Delta CapEx$ is the change in the ratio of capital expenditures (data90) to world-wide assets (data44) from the beginning of quarter t-4 to the beginning of quarter t. ΔROA is the change in the ratio of net income (data69*4) to world-wide assets (data44) from quarter t-1 to quarter t. *ROA* is the ratio of net income (data69*4) to world-wide assets (data44). *Debt* is the ratio of long-term debt (data51) plus debt in current liabilities (data45) to world-wide assets (data44). *DivYld* is dividends per share (data16) scaled by price (data14). $\Delta Cash$ is the change in the ratio of cash and cash equivalents (data36) to world-wide assets (data44) from the beginning of quarter t-4 to the beginning of quarter t. $\Delta Penalty$ equals the change in the dividend tax penalty from quarter t-4 to quarter t and the dividend tax penalty equals the dividend tax rate minus the capital gain tax rate divided by one minus the capital gain tax rate.

Panel A: Compustat Measures

Variable	Pred.	(1) ΔPayout Coefficient	t-statistic	(2) ΔDividends Coefficient	t-statistic	(3) ΔShrRep Coefficient	t-statistic	(4) ΔShrRep Coefficient	t-statistic
Intercept	?	0.00084	1.96	0.00026	2.55	0.00020	0.43	0.00025	0.56
PostAct	?	0.00148	7.96	0.00041	6.60	0.00111	6.19	0.00126	7.16
Repatriate	?	-0.00027	-1.71	-0.00002	-0.71	-0.00026	-1.69		
PostAct*Repatriate	+	**0.00281**	**4.44**	**0.00004**	**0.27**	**0.00277**	**4.28**		
MaxRep	?							-0.00001	-0.09
PostAct*MaxRep	+							**0.01937**	**3.47**
Size$_{t-1}$	+	0.00016	6.84	-0.00001	-2.03	0.00020	8.67	0.00019	8.36
ΔCapEx$_{t-1}$	-	-0.00063	-0.38	-0.00008	-0.12	-0.00086	-0.51	-0.00081	-0.48
ΔROA$_t$	?	-0.00111	-4.49	-0.00043	-5.58	-0.00042	-1.71	-0.00041	-1.66
ROA$_t$	+	0.00333	12.34	0.00086	9.80	0.00203	8.02	0.00201	7.93
Debt$_{t-1}$	-	-0.00404	-16.96	-0.00096	-11.36	-0.00308	-13.71	-0.00309	-13.78
DivYld$_{t-1}$	?/-	-0.02956	-2.81	0.00017	0.03	-0.04889	-6.07	-0.04918	-6.09
ΔCash$_{t-1}$	+	0.00530	10.43	0.00090	5.26	0.00508	10.22	0.00509	10.23
ΔPenalty$_t$	+/-	0.00140	2.63	-0.00201	-12.27	0.00339	6.50	0.00334	6.38
ΔPayout$_{t-4}$	-	-0.44744	-52.37						
ΔDividends$_{t-4}$	-			-0.32621	-15.77				
ΔShrRep$_{t-4}$	-					-0.45828	-51.50	-0.45819	-51.41
N		114,973		114,973		115,564		115,020	
Adj. R Square		0.1844		0.0693		0.1986		0.1984	

TABLE 8 Continued

Panel B: CRSP Measures

Variable	Pred.	(1) ΔPayout		(2) ΔDividends		(3) ΔShrRep		(4) ΔShrRep	
		Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
Intercept	?	0.00076	1.55	0.00019	2.22	0.00031	0.73	0.00041	0.96
PostAct	?	0.00099	4.58	0.00028	5.89	0.00073	3.99	0.00088	4.94
Repatriate	?	-0.00047	-2.81	-0.00006	-2.16	-0.00037	-2.49		
PostAct* Repatriate	+	**0.00267**	**3.93**	**0.00017**	**1.21**	**0.00254**	**4.23**		
MaxRep	?							-0.00008	-0.81
PostAct*MaxRep	+							**0.01671**	**3.09**
$Size_{t-1}$	+	0.00010	3.92	0.00000	-0.23	0.00013	5.61	0.00011	5.05
$\Delta CapEx_{t-1}$	-	0.00296	1.48	-0.00003	-0.06	0.00287	1.63	0.00284	1.61
ΔROA_t	?	-0.00118	-3.91	-0.00031	-5.35	-0.00054	-2.17	-0.00052	-2.11
ROA_t	+	0.00313	9.29	0.00071	9.61	0.00160	5.95	0.00159	5.87
$Debt_{t-1}$	-	-0.00360	-13.25	-0.00084	-11.00	-0.00212	-9.84	-0.00215	-9.98
$DivYld_{t-1}$	?/-	-0.00589	-0.53	-0.00105	-0.23	-0.03582	-4.90	-0.03618	-4.94
$\Delta Cash_{t-1}$	+	0.00327	5.68	0.00063	4.62	0.00203	4.22	0.00202	4.20
$\Delta Penalty_t$	+/-	0.00025	0.40	-0.00183	-12.55	0.00302	5.69	0.00294	5.53
$\Delta Payout_{t-4}$	-	-0.47069	-51.73						
$\Delta Dividends_{t-4}$	-			-0.32009	-15.71				
$\Delta ShrRep_{t-4}$	-					-0.47820	-56.89	-0.47840	-56.76
N		115,564		115,564		115,569		115,569	
Adj. R Square		0.2031		0.0714		0.2150		0.2149	

TABLE 9
Results of Two Stage Model to Correct for Self-selection Bias

The dependent variable in Panel A is *Repatriate*, a dummy variable equal to one for firms that repatriate under the Act. The coefficients in Panel A are estimated using a Probit regression. *FPTI* is the mean ratio of foreign pre-tax income to world-wide assets from 2002 through 2004. *ROA* is the mean ratio of net income to world-wide assets from 2002 through 2004. *Assets* is the log of world-wide assets at the end of 2004. All other variables in Panel A are defined in Table 3.The dependent variable in Panel B is the annual change from 2004 to 2005 in total repurchases, *ΔShrRep*, measured as the change in treasury stock scaled by world-wide assets. If there is a net decrease in treasury stock, then repurchases equals zero. For those firms that do not use the treasury stock method, we estimate share repurchases as repurchases of common and preferred stock from the statement of cash flows less decreases in preferred stock.   The coefficients in Panel B are estimated using a two-step procedure to control for self-selection in the decision to repatriate and includes the inverse Mills ratio from the probit estimation. Standard errors are corrected for correlation between the equations (Maddala 1983). *Size* is the log of the market value of equity at the end of 2004. *ΔCapEx* is the change in the ratio of capital expenditures to world-wide assets from the beginning of 2004 to the beginning of 2005. *ΔROA* is the change in the ratio of net income to world-wide assets from 2004 to 2005. *Debt* is the ratio of long-term debt plus debt in current liabilities to world-wide assets at the end of 2004. *DivYld* is 2004 dividends per share scaled by price. *ΔCash* is the change in the ratio of cash and cash equivalents to world-wide assets from the beginning of 2004 to the beginning of 2005. The sample includes 2,690 firms with necessary Compustat data available for the period 2001 to 2005, excluding firms with negative book values, firms incorporated outside the U.S, insurance companies, financial services firms, and firms with missing foreign activity in each of the previous three years.

Panel A: Probit Model of Repatriation

Variable	Predicted Sign	Coefficient	z-statistic
Intercept		-2.15110	-25.33
ΔFPTI	-	-0.29828	-2.31
Δ ROA	-	-2.33869	-2.21
Δ MB	-	-0.02027	-0.65
Δ RD	-	2.21524	0.51
Δ CapEx	-	-1.29853	-0.48
FCF	+	2.54592	4.68
RateDum	+	0.88904	7.98
USTR	+	0.83603	2.81
%FAssets	+	0.56244	4.53
FPTI	+	10.74749	7.02
ROA	+	0.84656	2.21
Assets	+	0.00001	4.89
N		2,696	

Panel B: Repurchases Model

Variable	Predicted Sign	Coefficient	z-statistic
Intercept		-0.00911	-1.37
Repatriate	+	0.00978	2.15
Size	+	0.00288	6.67
Δ CapEx	-	-0.00200	-0.09
Δ ROA	+	0.00710	1.94
Debt	-	-0.01927	-4.52
DivYld	?	-0.14119	-2.72
Δ Cash	+	0.00761	3.04
Δ ShrRep$_{t-1}$	-	-0.43807	-20.56
Inv. Mills Ratio	?	-0.00911	-1.37
N		2,696	
Wald Chi Square		541.15	

TABLE 10

Sensitivity Tests of Changes in Repurchases around the Act

The dependent variable in Column (1) is abnormal repurchases calculated by estimating the following equation by firm for years t-5 through t-1: $\Delta ShrRep_t = \gamma_0 + \gamma_1 ROA_t + \gamma_2 ShrRep_{t-1} + \eta_t$. Abnormal repurchases equals $\Delta ShrRep_t$ minus the predicted value from this equation. The dependent variable in Column (2) repeats the same process using $\Delta Payout$ in place of $\Delta ShrRep$. The dependent variable in Columns (3) and (4) is $\Delta ShrRep$. The sample includes firm-quarters from the first quarter of 1989 to the fourth quarter of 2005 with data available to calculate all regression variables, excluding firms incorporated outside the U.S., financial services firms, insurance companies, firms with no foreign activity in the previous three years, and firms with negative book values. In Column (3) we also eliminate firm-years for which $\Delta ShrRep$ equals zero. In Column (4) we also eliminate firms that do not report foreign segment sales. $\Delta ShrRep$ is the change from quarter t-4 to quarter t in repurchases measured as the change in treasury stock (data226) scaled by world-wide assets (data44). If there is a net decrease in treasury stock, then repurchases equals zero. For those firms that do not use the treasury stock method, we estimate share repurchases as repurchases of common and preferred stock from the statement of cash flows (data 93) less decreases in preferred stock (change in data55 and data71). *PostAct* equals one for the four quarters of 2005, zero otherwise. *Repatriate* equals 1 if the firm states that it will repatriate under the Act. *Size* is the log of the market value of equity (price (data14) times common shares outstanding (data61)). $\Delta CapEx$ is the change in the ratio of capital expenditures (data90) to world-wide assets (data44) from the beginning of quarter t-4 to the beginning of quarter t. ΔROA is the change in the ratio of net income (data69*4) to world-wide assets (data44) from quarter t-1 to quarter t. *Debt* is the ratio of long-term debt (data51) plus debt in current liabilities (data45) to world-wide assets (data44). *DivYld* is dividends per share (data16) scaled by price (data14). $\Delta Cash$ is the change in the ratio of cash and cash equivalents (data36) to world-wide assets (data44) from the beginning of quarter t-4 to the beginning of quarter t. $\Delta Penalty$ equals the change in the dividend tax penalty from quarter t-4 to quarter t and the dividend tax penalty equals the dividend tax rate minus the capital gain tax rate divided by one minus the capital gain tax rate.

| Variable | Pred. | Abnormal Repurchases and Payout | | | | Reduced Samples | | | |
| | | (1) Abnormal Repurchases | | (2) Abnormal Payout | | (3) Non-Zero Observations | | (4) Segment Sample | |
		Coefficient	t-statistic	Coefficient	z-statistic	Coefficient	t-statistic	Coefficient	t-statistic
Intercept	?	0.00059	1.60	0.00086	2.07	0.00318	2.68	0.00083	0.88
PostAct	?	0.00027	1.87	0.00031	1.81	0.00381	7.25	0.00145	5.28
Repatriate	?	0.00058	3.72	0.00102	5.92	-0.00086	-2.63	-0.00016	-0.89
PostAct* Repatriate	+	**0.00219**	**3.75**	**0.00175**	**2.77**	**0.00254**	**2.26**	**0.00229**	**3.26**
$Size_{t-1}$	+	0.00050	21.34	0.00077	29.76	0.00029	5.08	0.00024	6.90
$\Delta CapEx_{t-1}$	-	0.00070	0.44	-0.00002	-0.01	-0.00373	-0.62	0.00119	0.55
ΔROA_t	?	-0.00061	-3.35	-0.00067	-3.14	-0.00221	-2.46	-0.00029	-1.23
ROA_t	+					0.00775	7.58	0.00076	1.48
$Debt_{t-1}$	-	-0.00362	-16.54	-0.00666	-24.23	-0.00896	-13.77	-0.00487	-11.89
$DivYld_{t-1}$	?	-0.04177	-5.36	0.33617	26.77	-0.14717	-7.29	-0.00768	-2.84
$\Delta Cash_{t-1}$	+	0.00147	4.05	0.00135	3.29	0.01753	10.24	0.00614	8.21
$\Delta Penalty_t$	+	0.00304	5.65	0.00412	6.83	0.01032	6.98	0.00449	5.69
$\Delta ShrRep_{t-4}$	-					-0.59108	-58.14	-0.45600	-39.59
N		101,770		101,468		42,818		64,334	
Adj. R Square		0.0201		0.0588		0.2663		0.1994	