

Dividend Policy inside the Multinational Firm*

Mihir A. Desai
Harvard University and NBER

C. Fritz Foley
Harvard University and NBER

James R. Hines Jr.
University of Michigan and NBER

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ABSTRACT

Three factors significantly influence profit repatriations by U.S. multinational firms: tax considerations, domestic financing and investment needs, and agency problems inside firms. Dividend repatriations are surprisingly persistent and resemble dividend payments to external shareholders. Tax considerations are influential but not decisive. Affiliates whose organizational forms carry differing tax treatments nonetheless feature similar repatriation policies, and certain firms incur avoidable tax penalties by simultaneously repatriating profits and investing new equity. Parental financing needs also matter, as parents with larger dividend payouts to external shareholders, and highly levered parent companies with profitable domestic investment opportunities, draw on the resources of their foreign affiliates. Finally, affiliates that are incompletely controlled are more likely than others to make regularized dividend payments and to trigger avoidable tax costs through repatriations. Taken together, the results indicate that traditional corporate finance concerns – taxation, costly external finance, and agency problems – are also critical to the internal capital markets of multinational firms.

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Mihir A. Desai
Harvard Business School
Baker 265
Soldiers Field
Boston, MA 02163
mdesai@hbs.edu

C. Fritz Foley
Harvard Business School
Baker 265
Soldiers Field
Boston, MA 02163
ffoley@hbs.edu

James R. Hines Jr.
Department of Economics
University of Michigan
611 Tappan Street
Ann Arbor, MI 48109-1220
jrhines@umich.edu

1. Introduction

The choice of whether to repatriate earnings from a foreign subsidiary is one of the most important decisions in multinational financial management. This paper identifies the factors that shape repatriation policy, thereby illuminating the functioning of the internal capital markets of multinational firms.

Dividend repatriations represent sizable financial flows. In 1999, a year in which U.S. corporations listed in Compustat had after-tax earnings of \$516 billion and paid \$198 billion in dividends to common shareholders, the foreign affiliates of U.S. multinational firms had after-tax earnings of \$182 billion and repatriated \$97 billion to the United States as dividends.¹ Indeed, commentators speculated that the temporary tax reduction on repatriations enacted in 2005 might generate capital flows sizable enough to have macroeconomic consequences. Surprisingly, relatively little is understood about the characteristics and determinants of the policies governing these payments. This paper analyzes the repatriation behavior of virtually all U.S. multinational parents and their subsidiaries from 1982 to 2002. The paper identifies three factors that shape dividend policy within the multinational firm: the taxation of dividend income, domestic financing and investment needs, and agency problems inside firms.

The flows of capital analyzed in this paper consist of payments to multinational parents declared out of the income of foreign subsidiaries and do not include the repatriation of invested equity. As described below, tax considerations alone would suggest that dividend policies inside the firm would be irregular and lumpy. In contrast to these predictions, dividend repatriations are quite regularized and can be characterized by a process of partial adjustment first described by John Lintner (1956). Multinational firms behave as though they select target payouts for their foreign affiliates, gradually adjusting payouts over time in response to changes in earnings. Current dividends by affiliates rise by roughly 40 cents with every additional dollar of their after-tax profits. This pattern of persistent payouts appears not to be an artifact of other regularized investment or financing decisions at the affiliate level.

Comparing the behavior of foreign affiliates subject to different foreign tax rates, and foreign affiliates with differing organizational forms, illuminates the relevance of tax factors. As in Desai, Foley and Hines (2001), the evidence indicates that firms pursue dividend payout policies

designed in part to reduce tax obligations. Further analysis, however, reveals that tax minimization cannot explain a significant portion of observed dividend policies inside firms. Sharply distinctive tax treatments across organizational forms are associated with only modest differences in dividend policies. Indeed, some firms appear to engage in a variety of tax-penalized behavior involving the simultaneous repatriation of a dividend and investment of new equity in the same subsidiary.

Costly external finance may lead parent companies to seek cash dividends from their foreign affiliates to satisfy domestic financing and investment needs. Corporations paying dividends to common shareholders could, for example, fund these payments by triggering repatriations. Comparing the dividend behavior of affiliates of publicly and privately held parent firms and introducing controls for parental dividend payouts indicates that a portion of external dividend payments are funded with repatriations from foreign affiliates. Surprisingly, however, only a small difference exists between the dividend repatriation policies of firms facing public capital market pressures to pay dividends to common shareholders and those not facing such pressures.

Financially constrained parents with profitable domestic investment opportunities might finance capital expenditures by drawing on the accumulated earnings of foreign affiliates. This possibility can be tested by measuring the extent to which the dividend policies of heavily leveraged firms in industries with high values of Tobin's q differ from the dividend policies of other firms. The evidence indicates that firms with significant domestic cash needs arising from a combination of attractive domestic investment opportunities and high degrees of leverage repatriate cash from foreign affiliates to meet these needs.

The inability to fully monitor foreign managers can also give rise to distinctive repatriation policies. Regularized dividend payments restrict the financial discretion of foreign managers, thereby reducing associated agency problems. Conflicts of interest are most apt to arise when ownership is divided, as local owners may influence managers to undertake transactions at other than market prices. The empirical results indicate that explicitly tax-penalized behavior is most common when affiliates are partially owned, suggesting that at least some of the regularization of dividend repatriations may be driven by control considerations inside the firm. Taken as a whole, the results demonstrate that traditional corporate finance concerns – taxation, costly external

finance, and agency problems – typically emphasized with respect to arms-length financing decisions also influence the internal capital markets of multinational firms.

Section two of the paper summarizes tax and non-tax motivations for repatriation policies. Section three describes the data and provides some descriptive statistics. Section four analyzes the repatriation policies of foreign affiliates of American firms. Section five is the conclusion.

2. *Motivations for repatriation policies*

Much of the previous work on dividend repatriations analyzes the effects of taxes. Dividend repatriations from foreign affiliates to American parent companies are voluntary distributions with tax consequences that are functions of their magnitude and timing. American corporations owe taxes to the United States on their foreign incomes, but are entitled to defer U.S. tax liabilities on the unrepatriated portions of the profits of incorporated foreign affiliates. The United States also permits firms to claim credits against U.S. taxes for any foreign income taxes paid on income remitted as dividends. Dividend repatriations from foreign subsidiaries to their American parents therefore generate U.S. tax liabilities that are functions of differences between foreign tax rates and the U.S. corporate tax rate.

Generally speaking, firms owe U.S. taxes based on the difference between the applicable foreign tax rate and the U.S. rate; if the U.S. tax rate exceeds the foreign tax rate, then the effective repatriation tax equals the difference between the two. If, instead, the foreign tax rate exceeds the U.S. tax rate, then dividends trigger no additional U.S. tax liability, and taxpayers can apply any difference against U.S. tax liabilities on other foreign income. A notable exception to this treatment is that the dividend flows from *unincorporated* foreign branch affiliates and incorporated foreign affiliates that are indirectly owned through certain other countries do not have U.S. tax consequences. U.S. taxes are due on foreign branch income as earned, regardless of whether or not dividends are paid. If an affiliate is indirectly owned by a parent using a holding company located in a country that does not tax dividend repatriations, then the firm can generally relocate affiliate profits without incurring U.S. tax costs. This distinction is important to the analysis of taxation and repatriation policies, as it is possible to isolate the relative importance of tax factors by comparing the policies of incorporated and unincorporated foreign subsidiaries.

The desire to avoid U.S. tax liabilities is likely to influence dividend repatriations in relatively straightforward ways. Given that U.S. tax liabilities are triggered by repatriation, these tax liabilities can be deferred by reinvesting earnings abroad rather than remitting dividends to parent companies.² The incentive to defer repatriation is much stronger for affiliates in low-tax countries, whose dividends trigger significant U.S. tax obligations, than they are for affiliates in high-tax countries – particularly since taxpayers receive net credits for repatriations from affiliates in countries with tax rates that exceed the U.S. rate.³ As a consequence of these incentives, dividend policies that maximize value are thought to be irregular and lumpy to facilitate the averaging of credits across countries with different tax rates.⁴

Previous studies of dividend repatriations emphasize these tax factors. For example, Hines and Hubbard (1990) analyze a cross-section of U.S. multinationals using IRS data from 1984, finding that tax considerations affect the timing of dividend repatriations. Other tax-focused studies of dividend policy inside the firm, such as Altshuler, Newlon, and Randolph (1995), use repeated cross-sections to distinguish effects associated with transitory and permanent changes in tax costs. Altshuler and Grubert (2003) and Desai, Foley and Hines (2003) note that firms can defer repatriation tax liabilities by investing foreign profits in other foreign affiliates rather than repatriating profits to domestic parent companies, and provide evidence of the proliferation of organizational forms that facilitate such deferral. Finally, Desai, Foley and Hines (2001) calculate the efficiency costs of repatriation taxes using estimates of the responsiveness of repatriations to taxes in a panel setting.

There are strong reasons to expect dividend repatriation policies to reflect considerations other than merely tax factors. Since dividend repatriations represent significant financial flows, repatriation policies may reflect financing concerns of parents who draw on subsidiary cash flows to finance domestic expenses. Two examples of such domestic expenses are dividend payments to external shareholders and capital expenditures in home countries. Since external finance can be quite costly, particularly for firms already maintaining large amounts of external debt, dividend repatriations from foreign affiliates may offer an attractive source of finance for payments of dividends to common shareholders and domestic investment expenditures, despite possible associated tax costs.

Finally, the desire to control corporate managers around the world carries implications for dividend policies. A multinational firm's central management can use financial flows within the firm to evaluate the financial prospects and needs of far-flung foreign affiliates and to limit the discretion of foreign managers. In a 1998 speech to country managers, the CFO of Wyeth Pharmaceuticals identified several mechanisms of diversion by country managers, including using vendors to misappropriate corporate funds, employing unauthorized sales programs and trade promotions for personal benefit, and transacting with family-owned firms at the expense of the multinational firm.⁵ As this observation suggests, it may be sensible to mandate dividend payments to police and monitor foreign managers, limit their ability to misallocate funds, and to extract returns on investments – much as public shareholders use dividends to monitor and control their firms.

3. Data and Descriptive Statistics

The Bureau of Economic Analysis (BEA) Annual Survey of U.S. Direct Investment Abroad from 1982 through 2002 provides a panel of data on the financial and operating characteristics of the foreign and domestic activities of U.S. multinational firms.⁶ The International Investment and Trade in Services Survey Act requires that all firms larger than a certain size file detailed financial and operating items for each affiliate and information on the value of transactions between U.S. parents and their foreign affiliates, as a result of which the survey sample is uniquely comprehensive.

In the BEA survey, data on dividend payments made by affiliates reflect only payments to stockholders declared out of current and prior period net income and therefore exclude other types of capital movement such as the repatriation of funds associated with the sale of equity. Dividend payments from affiliates to their parents appear to be common, large, and persistent. Figure 1 plots the percent of affiliates reporting positive dividends and the median payout ratio among payers for two types of affiliates—majority owned incorporated affiliates and branches—over the entire sample period. Averaging across the annual rates presented indicates that thirty-one percent of majority owned incorporated affiliates and twenty-seven percent of branches pay dividends. The median ratio of dividends to net income for payers (again averaging annual ratios across years) is seventy-one percent for majority owned incorporated affiliates and eighty-eight

percent for branches. Foreign subsidiaries and foreign branches are roughly equally likely to remit dividends, doing so with similar payout ratios.

Dividend payments exhibit strong intertemporal persistence. Averaging across years, sixty-nine percent of affiliates that paid dividends in one year paid dividends again the following year. Figure 2 displays this rate for each year over the 1982-2002 period. This figure indicates that the rate of persistence has remained high over the sample period. The regression analysis reported in section four exploits the panel nature of the data. Table 1 provides information on the means and standard deviations of variables used in the empirical work.⁷

4. *Empirical design and results*

The Lintner (1956) dividend model, first developed to analyze dividend payments from corporations to diffuse common shareholders, provides a valuable analytic framework with which to identify the nature of repatriation policies. Benartzi, Michaely and Thaler (1997), among others, conclude that “Lintner’s model of dividends remains the best description of the dividend setting process available.” Accordingly, it is instructive to consider the extent to which the Lintner model characterizes the repatriation policies of multinational affiliates, with particular attention to how foreign earnings translate into dividends.

The first step in identifying the dividend policies of foreign affiliates is to estimate the parameters associated with the Lintner framework. The essential features of the Lintner model are that tax and nontax variables determine target payout ratios as well as the rates at which actual dividends adjust to desired dividends. It is then possible to generalize the Lintner framework by estimating the parameters of payout functions that differ between affiliates, based on observable characteristics of affiliates and parent companies. This permits identification of the extent to which tax motivations, domestic financing and investment needs, and control problems influence target payout ratios and rates of adjustment.⁸

4.1. *Payout policies of foreign affiliates*

Table 2 displays the results of estimating a Lintner dividend equation for all majority-owned affiliates, taking all affiliates to have identical dividend payout equations. Since the Lintner specification includes lagged dividends as an explanatory variable, the 102,380 affiliate-

year observations exclude those affiliates appearing only once in the sample, and the initial observations of all affiliates, including all 1982 observations. The Lintner specification fits the data quite well.⁹ The estimated 0.2263 coefficient on lagged dividends in the regression reported in column 1 implies that affiliates pay dividends with adjustment parameters equal to $(1 - 0.23)$, or 0.77. The affiliate's desired steady-state payout ratio is given by the ratio of the estimated coefficient on net income (0.37) and the estimated adjustment parameter – in the case of the estimates reported in column one, the implied desired steady-state payout ratio is $(0.37/0.77)$, or 48 percent.

Columns 2 and 3 repeat this regression, introducing fixed effects for parents and for affiliates, respectively, in order to control for unobservable characteristics that might influence dividend policy at the parent or affiliate level. While the results with parent fixed effects are not notably different from results in column 1, the inclusion of affiliate fixed effects sharply reduces the magnitude of the estimated coefficient on lagged dividends, presumably by removing much of the variation in lagged dividends. Since this is largely an artifact of the shortness of the panel, the subsequent analysis incorporates parent, rather than affiliate, fixed effects. A Tobit specification of the basic Lintner regression equation presented in column 4 provides qualitatively similar results.

Dividend policy is one component of an overall financial policy that includes decisions regarding net borrowing, capital expenditures, and other sources and uses of funds. It is possible that foreign affiliates with attractive investment opportunities finance their new capital expenditures largely by reducing or omitting dividends to parent companies. If so, and if capital expenditures are correlated over time, then the estimated dividend equations displayed in Table 2 and elsewhere might reflect the impact of changing investment patterns.

Table 3 presents the results of a number of regressions designed to explore this possibility. The first two columns of Table 3 present estimated coefficients for equations that are identical to those presented in columns 1 and 2 of Table 2, with the exception that affiliate capital expenditure is added as an explanatory variable. This inclusion has very little impact on the estimated net income and lagged dividend coefficients, which are almost identical to the values reported in Table 2. Furthermore, the estimated effects of affiliate capital expenditures

are positive in the regressions reported in columns 1 and 2, which is inconsistent with a simple model in which dividend repatriations represent funds not used for foreign capital expenditures.

It is not necessary for foreign affiliates with attractive investment opportunities to reduce planned dividend payments to their American parents, since capital expenditures, as well as dividends, can be financed by net borrowing. Columns 3 through 6 of Table 3 report the results of regressions in which the sample of foreign affiliates is distinguished by the extent of local indebtedness. Affiliates with local debt/asset ratios that exceed median values for their industries are classified as having “high” local debt, while others are classified as having “low” local debt. Affiliates with high local debt/asset ratios arguably have the least ability to use capital markets to obtain additional financing for their activities, and therefore might exhibit the greatest impact of capital expenditures on dividends.

The results reported in columns 3 and 4 of Table 3 indicate that affiliates with considerable debt have dividend payout ratios that are higher and more sensitive to income than are the payout ratios of affiliates with little debt. The 0.3167 and 0.0943 coefficients in column 4 together imply that heavily indebted affiliates increase their dividend repatriations by \$0.41 for every additional dollar of foreign income, whereas affiliates without heavy debt obligations increase their dividend repatriations by \$0.32 for every additional dollar of foreign income. Inclusion of capital expenditures, and its interaction with high local borrowing, in the regressions reported in columns 5 and 6 changes these results very little. The regression reported in column 6 of Table 3 indicates that affiliate capital expenditures have statistically insignificant effects on dividend repatriations once affiliate debt levels are taken into account, with slightly smaller predicted effects in cases of heavily indebted affiliates.

4.2. *Tax motivations*

Tax considerations are likely to influence dividend policies inside firms, since firms have incentives to organize internal fund transfers in tax-conscious ways. The tax consequences of paying dividends are functions of affiliate organizational forms, whether parent companies own affiliates directly or indirectly, and local tax rates. The regressions reported in Table 4 include interactions of net income and lagged dividends with dummy variables for branches and indirectly owned incorporated affiliates in order to identify the extent to which dividend payout

behavior differs between affiliates with different organizational forms and, consequently, differing tax motivations. Earlier analysis by Desai, Foley and Hines (2001) found that tax rate differences influence repatriations for directly-owned incorporated subsidiaries. The regressions reported in Table 4 build on that analysis to measure the extent to which dividends from branch affiliates and indirectly-owned affiliates are more or less sensitive to foreign tax rate differences than are dividends from directly-owned subsidiaries.

Foreign tax rates are likely to have smaller effects on dividend repatriations from branch affiliates and indirectly-owned affiliates than they are on dividend repatriations from directly-owned subsidiaries. Dividend repatriations by foreign branches do not have U.S. tax consequences, since the United States taxes foreign branch income whether or not it is repatriated as dividends. Dividend payments from foreign affiliates that American companies own indirectly through other foreign affiliates will not trigger a home country tax liability unless the recipient resides in a jurisdiction that taxes foreign source income. Since many of the foreign affiliates of American corporations that are conduits for indirect ownership are judiciously located in countries that do not tax foreign income, it is unlikely that dividend payments from affiliates to indirect owners generate U.S. tax liabilities.¹⁰

The results reported in column 1 of Table 4 suggest that organizational form differences have only very minor implications for the general nature of dividend payout processes.¹¹ The estimated 0.0425 coefficient on the interaction of the branch dummy variable and affiliate net income is positive but small and statistically insignificant; the estimated coefficient on the interaction of the branch dummy and lagged dividends is likewise insignificant. The estimated coefficients on variables that interact dummy variables for indirect ownership are likewise relatively small and insignificant.¹² As a consequence, the corresponding implied desired payout ratios and adjustment parameters for directly-owned incorporated affiliates, branches, and indirectly owned affiliates are all very close to each other. This regression implies that affiliates with different forms of parent ownership and very different tax motivations exhibit very similar dividend payout policies. Columns 3 and 5 repeat these regressions introducing fixed effects for parents and a Tobit specification of the regression equation in place of OLS; the results are very similar to those reported in column 1, in that coefficients on organizational form interactions remain insignificant.

Investigating country-level variation in the tax cost of paying dividends provides a finer measure of the importance of tax motivations for affiliates. The regression reported in column 2 of Table 4 includes country tax rates interacted with affiliate net income in addition to the variables used in the regressions reported in column 1. Country tax rates are measured by calculating ratios of foreign income taxes paid to the sum of foreign income taxes and net income for each affiliate observation, then using medians of these rates as country-level observations for each country and year.¹³ High foreign tax rates reduce the cost of paying dividends from directly-held foreign subsidiaries to American parent companies, since doing so generates accompanying foreign tax credits that offset the associated U.S. tax liability.

The results reported in column 2 of Table 4 confirm that tax costs affect the long-run payout ratios of incorporated affiliates. The estimated 0.4085 coefficient on the interaction of country tax rates and net income reported in column 2 is both large and statistically significant, indicating that affiliates set higher payout ratios in countries where paying dividends generates larger foreign tax credits and therefore lower home country tax liabilities.¹⁴ Looking at the value of the interaction of country tax rates and net income across organizational forms provides additional evidence of the impact of home country tax considerations on affiliate dividend payments. The estimated -0.5058 coefficient on the interaction of country tax rates, net income, and the indirect ownership dummy variable implies that tax rates do not influence payout ratios of indirectly owned affiliates. The sum of this coefficient and the coefficient on the country tax rate interacted with net income is -0.0973 , and it does not differ significantly from zero. This is consistent with the tax incentives facing indirectly owned affiliates, and the way in which they differ from the incentives facing separately incorporated affiliates. The estimated -0.0469 coefficient on the interaction of country tax rates, net income, and the branch dummy likewise indicates that tax effects on repatriations are likewise mitigated in the case of foreign branches, which is consistent with their incentives. The inclusion of parent fixed effects in column 4 and use of a Tobit specification in column 6 produce similar results.¹⁵ In these specifications, the payout ratios of branches as well as indirectly owned affiliates do not vary with tax rates in a statistically significant way.

The evidence indicates that incorporated affiliates adjust long-run payout ratios to reflect tax costs. The absence of such effects on the payout ratios of branches and indirectly owned

affiliates is consistent with the importance of tax motivations. Nonetheless, the similarity of the dividend policies of affiliates with different organizational forms, that thereby face different tax treatments, indicates that tax motivations do not fully account for patterns of dividend policies inside firms.¹⁶

4.3. *Parent company cash needs*

One straightforward explanation for the presence of Lintner-like patterns inside the firm is that the demands of diffuse shareholders in public capital markets are translated into demands for dividend repatriations inside the firm. Parent firms that feel obliged to pay dividends to common shareholders might draw on financial resources available in foreign affiliates, thereby triggering dividend repatriations. This process is likely to be strongest in cases of firms with significant foreign earnings, in view of the widely documented tendency to pay greater dividends out of \$1 of foreign earnings than \$1 of domestic earnings.¹⁷ Another possibility is that parent companies with attractive domestic investment opportunities will draw on the resources of their foreign affiliates, with these resource flows taking the form of dividend repatriations.

Figure 3 explores these possibilities. The heights of the bars in the figure measure the fraction of domestic parent companies receiving nonzero dividends from their foreign affiliates, grouping parent firms into terciles in two different ways. The left bar presented for each tercile presents information for firms as characterized by the ratio of parent payouts to common external shareholders to parent domestic after-tax earnings. The right bar for each tercile presents information for firms as characterized by the attractiveness of domestic investment opportunities as measured by Tobin's q , higher values of q corresponding to greater desired investment.¹⁸ As the figure illustrates, parent companies with the highest dividend payout ratios are the most likely to receive dividend repatriations from their foreign affiliates. Greater investment opportunities are also associated with higher likelihood of repatriation from foreign affiliates, again suggesting that repatriations are used to satisfy parent company cash needs. Since the patterns presented in Figure 3 do not control for affiliate profitability and other characteristics that are likely to influence repatriations, it is necessary to include these characteristics as independent variables in order to identify more precisely the impact of cash demand by parent companies.

A comparison of the dividend policies of affiliates whose parents face different degrees of exposure to public capital markets offers a test of the hypothesis that needs for domestic financial resources to pay dividends to common shareholders are strong enough to drive repatriation policies. Table 5 reports the results of affiliate payout regressions that take explicit account of the ownership of parents companies, and, in the case of publicly-held companies, their dividend policies. The dependent variable in the regressions reported in Table 5 is dividend repatriations from affiliates to their parents. The first column of Table 5 is limited to the sample of affiliates whose parents do not appear in Compustat in order to capture those affiliates that do not face the demands of public shareholders.¹⁹ The implied desired steady-state payout ratios (0.39) and adjustment parameters (0.80) of affiliates of these private firms are similar to the desired payout ratios (0.51) and adjustment parameters (0.74) of affiliates whose parents are listed in Compustat, as reported in column 2. This simple comparison suggests that capital market pressures are unlikely to account for estimated affiliate payout equations, since firms that are not publicly traded presumably face little capital market pressure to pay dividends to their owners but nevertheless exhibit similar behavioral patterns. The similarity of the dividend policies of the foreign affiliates of private and public parents persists with the inclusion of parent-fixed effects, as reported in columns 4 and 5 of Table 5, and in the Tobit specifications reported in columns 7 and 8.

Columns 3, 6, and 9 of Table 5 report estimated coefficients from payout equations for affiliates of Compustat firms, in which a variable intended to capture parental financial pressure stemming from financial flows to common shareholders is included as an independent variable. The variable “parent dividends to shareholders interacted with relative assets” is the product of parent dividends and the ratio of affiliate assets to total firm assets. If parents finance dividends to shareholders with funds drawn from all parts of the firm in proportion to assets, then an affiliate should be expected to remit a dividend to its parent equal to the value of this variable. Hence if parental pressures determine repatriation policies in this manner, the estimated coefficient on this variable would be close to unity.

The estimated coefficients on “parent dividends to shareholders interacted with relative assets” in the OLS specifications equal roughly 0.14, differing significantly from one. Parental financial pressures as measured by dividends to common shareholders explain some, but only a

modest portion, of affiliate dividend payouts. In addition, estimates of desired steady-state payout ratios and adjustment parameters are not significantly affected by inclusion of the “parent dividends” variable on the right side. The OLS results, reported in columns 3 and 6 of Table 5, differ somewhat from the Tobit results reported in column 9, since the estimated coefficients from the Tobit specification suggest that affiliate dividends are higher when parent dividends are smaller. Taken together, the results in Table 5 indicate that the dividend policies of affiliates of privately owned parents are quite similar to the dividend policies of affiliates whose parents are publicly owned.²⁰

Multinational firms seeking to expand domestic investment are able to draw on the resources of their foreign affiliates. These financing needs, in turn, might dictate repatriation policies, particularly if parent firms are otherwise financially constrained. In order to evaluate this possibility, it is useful to examine how repatriation policies vary as a function of domestic investment opportunities and limited access to additional external investment funds. Highly leveraged firms have been emphasized in previous studies of the role of financing constraints in limiting investment responses to profitable opportunities.²¹ Accordingly, the regressions reported in Table 6 analyze whether highly levered parent firms repatriate funds from their foreign affiliates when facing attractive domestic investment opportunities, and measure the extent to which such repatriations account for the regularized patterns of payout policy.

The dependent variable in the regressions reported in Table 6 is total repatriations received by parent companies from all of their foreign affiliates. Since these regressions consider the impact of financing needs at the parent company level, the unit of observation is a parent-year cell. Column 1 of Table 6 reports a regression that is simply an aggregated (at the parent level) version of the regression reported in column 2 of Table 2, with a very similar estimated coefficient on net income and a somewhat larger coefficient on lagged dividends. The regression reported in column 2 of Table 6 adds an interaction between affiliate income and parent leverage, with parent leverage defined as the ratio of total domestic liabilities to total domestic assets reported to the BEA. The estimated coefficients on aggregate affiliate net income and aggregate lagged dividends reported in column 2 imply that parents with zero leverage have a target payout ratio of 50.8 percent, in contrast to the implied target payout ratio from column 1 of 61.1 percent. The coefficients in column 2 also imply that target payout ratios

are a function of leverage, as firms with leverage ratios of one have target payout ratios of 70.9 percent.²²

In evaluating whether foreign resources are deployed to finance domestic investment by financially constrained firms, it is useful to consider the combined impact of leverage and current investment opportunities. The regressions reported in columns 3 and 4 are run on separate samples, the observations in column 3 consisting of firms with domestic activity primarily classified in three-digit industry and year cells with above-median values of Tobin's q , and the observations in column 4 consisting of firms with domestic activity primarily classified in industry and year cells with below-median values of Tobin's q . The estimated impact of parent leverage differs sharply between these two samples, the -0.0236 coefficient in column 3 suggesting that greater parent leverage slightly reduces the effect of foreign income on repatriations by affiliates of parent companies in industries with low q s, whereas the 0.1208 coefficient in column four implies that greater leverage is associated with significantly greater repatriations by firms in industries with high q 's.²³

The evidence in Table 6 indicates that the combination of high leverage and significant investment opportunities motivates firms to increase target payout ratios for their foreign affiliates. While the regressions reported in Table 6 provide evidence that foreign earnings are an important source of finance for domestic investment, these results also indicate that the Lintner process that characterizes dividend repatriations is not a manifestation of this financing channel alone. The coefficients in columns 3 and 4 indicate that firms with no leverage and above-average investment opportunities still pursue Lintner-like policies, as do firms with below-average investment opportunities regardless of their leverage. Consequently, it is necessary to entertain additional explanations for the determinants of dividends inside the firm.

4.4. *Dividends and incomplete ownership*

Incomplete ownership of foreign affiliates reduces the ability of parent companies to monitor and control foreign managers. Partial ownership of foreign affiliates by local firms in host countries increases the risk that a manager will pursue related party transactions not in the interest of the multinational parents. In such a setting, a rigid repatriation policy may help to control foreign management by limiting its financial discretion.

In order to investigate the extent to which regularized dividend payments are used to mitigate problems arising from incomplete ownership, the regressions presented in Table 7 consider the determinants of regularized payment of dividends by constructing a measure of the regularity of dividend payments for firms that appear in the sample frequently. Specifically, the first three columns of the table report estimated coefficients from OLS regressions in which the dependent variable is the fraction of years in which dividends are paid by affiliates appearing in the sample at least five times. The positive estimated coefficients on the country tax rate variable across the specifications presented in columns 1 through 3 are consistent with the tax incentives that affiliates face, since higher foreign tax rates reduce U.S. obligations upon repatriation.²⁴

Columns 2 and 3 of Table 7 add a partial ownership dummy that equals one if the American parent owns less than 100 percent of an affiliate and equals zero otherwise.²⁵ The results reported in columns 2 and 3 indicate that partially-owned affiliates pay dividends most frequently; the estimated coefficients imply that partially owned affiliates pay dividends in nine percent more years than do wholly owned affiliates.

One of the strong implications of the U.S. tax treatment of foreign income is that American multinational corporations should not simultaneously remit dividends from low-tax foreign locations and transfer equity funds into the same foreign locations. Doing so generates a home-country tax liability that could be easily avoided simply by reducing both dividends and equity transfers. Nevertheless, the data indicate that American multinational firms engage in this tax-penalized behavior. Indeed, Figure 4 documents that the likelihood of paying a dividend is the same across the sample period regardless of the contemporaneous change in paid-in-capital. The regressions presented in columns 4-6 of Table 7 examine the determinants of tax-penalized behavior, in order to test whether this behavior is driven by situations in which parent firms impose rigid repatriation policies in reaction to partial ownership of affiliates.

Columns 4-6 of Table 7 report regressions run on the sample of affiliate-years for which parent companies increased paid-in affiliate capital. The table reports estimated coefficients from Probit specifications in which the dependent variable equals one if the affiliate paid a nonzero dividend to its parent and equals zero otherwise. The large positive estimated

coefficients on the country tax rate variable indicates that affiliates in high tax rate countries are the most likely to pay dividends while receiving equity transfers from their parents, which is consistent with their tax incentives. For parents without excess foreign tax credits that have affiliates located in countries with high tax rates, it can be advantageous to remit dividends while simultaneously transferring equity funds from the parent, since doing so generates foreign tax credits that can profitably be used to reduce tax burdens on other income. The estimated positive coefficients on the partial ownership dummy variable is consistent with the results reported in columns 2-3 that parent companies require partially owned affiliates to pay regular dividends; indeed, estimates from column 5 imply that the effect of partial ownership is similar to the effect of a 100 percent higher tax rate. The dividend behavior of partially owned affiliates differs significantly from that of affiliates that are wholly owned by their parents.

5. Conclusion

The foreign affiliates of American multinational corporations follow well-defined repatriation policies that entail gradual adjustment of payouts in the direction of targets that depend on current earnings and the tax costs of repatriating dividends. While repatriation policies are responsive to tax factors, the similarity of dividend policy across entities facing distinctive tax treatments indicates that tax motivations alone cannot explain the observed patterns of behavior. Repatriations help parents meet their financing needs as larger dividends to external shareholders are associated with larger dividend repatriations inside the firm, and highly levered parent companies with profitable domestic investment opportunities draw more heavily on the resources of their foreign affiliates. Analysis of explicitly tax-penalized behavior and regularized repatriation policies suggests that shared ownership of foreign affiliates contributes substantially to the routinization of repatriation policy inside the firm.

What Fischer Black (1976) christened the “dividend puzzle” – the problem of reconciling observed dividend behavior with economic incentives facing the relevant decision makers – is typically cast as a result of the relationship between external shareholders and internal corporate managers. Repatriation policy inside the firm is subject to many, but not all, of the same pressures as are the dividend policies of firms with public ownership. The results in this paper indicate that the factors that govern repatriation policies inside the firm – tax factors, costly external finance at

the parent level and agency concerns with the firms – are those that scholars have emphasized in attempting to resolve the dividend puzzle more generally.

¹ The figures for the after-tax earnings and dividends of Compustat firms are taken from Grullon and Michaely (2002). The figure for the aggregate repatriations of U.S. multinationals is imputed from the confidential BEA data employed in the paper. In 1999, dividends are reported by all affiliates filing the long form. These affiliates paid \$74,038 million in dividends and reported \$138,958 million in net income. If the implied 53% payout ratio is applied to the total affiliate net income of \$181,915, estimated total dividends are \$96,926 million.

² The Subpart F provisions of U.S. tax law treat income from passive investments as though repatriated, thereby subjecting such income to immediate U.S. taxation. Hence foreign subsidiaries must invest in active foreign business operations in order to defer U.S. taxation of their profits. Income that was previously taxed under Subpart F may be repatriated without additional U.S. tax costs. Appendix I of Desai, Foley and Hines (2002) elaborates on the tax rules that apply to U.S. multinational corporations, and the incentives that they create. It is noteworthy that parent companies with excess foreign tax credits (generated from foreign operations that are taxed at rates exceeding the U.S. tax rate) do not incur contemporaneous U.S. tax liabilities when repatriating additional income, though they must expend foreign tax credits, which might otherwise have been carried into future years, when repatriating income from low-tax locations.

³ Hartman (1985) applies the “tax capitalization” or “new view” logic to the multinational firm in order to suggest that repatriation taxes need not affect multinational dividend policy if current repatriation tax conditions are not expected to change. In practice, there is ample evidence (see Altshuler, Newlon and Randolph (1995)) that conditions do change over time, thereby making it attractive to repatriate dividends opportunistically. Since excess foreign tax credits cannot be carried forward and back in time without loss of present value, even firms in unchanging tax situations face incentives to combine dividend repatriations from affiliates in high-tax and low-tax locations. Such strategies are costly and not always available, as a result of which repatriation taxes discourage dividend repatriations from affiliates, particularly those in low-tax countries. Aggregate data reported by Luttrell (1999) indicate that American corporations had foreign taxable income of \$114 billion in 1995, which was thereby responsible for an aggregate U.S. tax obligation of approximately \$40 billion. American corporations were able to claim \$31 billion in foreign tax credits for taxes paid and accrued in 1995, and had (limited) access to an additional \$6 billion of foreign tax credit carryforwards, thereby producing a U.S. tax liability of between \$3-9 billion on foreign income earned that year. The United States Congress, Joint Committee on Taxation (1997) estimates that deferral of U.S. taxation of unrepatriated foreign earnings saved American corporations \$1.2 billion in 1998. This evidence suggests that taxpayers are unable to find cost-effective methods of avoiding all of their U.S. tax liabilities on foreign income.

⁴ Some host countries, particularly among low-income countries in the earlier years of the sample, limit dividend repatriations through the use of capital controls. Desai, Foley, and Hines (2004) find that dividend repatriations are responsive to tax incentives controlling for such policies.

⁵ The speech by the Wyeth CFO was made public as part of a lawsuit brought by the general manager of the firm’s Swedish subsidiary, who alleged that he was demoted for revealing alleged improprieties related to the tax treatment of compensation of foreign managers.

⁶ Detailed information on the data collected in this survey appears in Appendix II of Desai, Foley and Hines (2002) and in Mataloni (1995). U.S. direct investment abroad is defined as the direct or indirect ownership or control by a single U.S. legal entity of at least ten percent of the voting securities of an incorporated foreign business enterprise or the equivalent interest in an

unincorporated foreign business enterprise. A U.S. multinational entity is the combination of a single U.S. legal entity that has made the direct investment, called the U.S. parent, and at least one foreign business enterprise, called the foreign affiliate. The term affiliate refers to both subsidiaries, those affiliates incorporated abroad, and unincorporated branch affiliates.

⁷ Minority-owned foreign affiliates are not part of the panel, as dividend payments are not recorded for these affiliates. The sample is selected to omit affiliates with the highest 1 percent of net income and lowest 1 percent of net income each year in order to enhance the robustness of the results. Also, calculated country tax rates are constrained to lie between 0 percent and 100 percent, which entails adjustments to 226 affiliate-year observations.

⁸ Early cross-sectional studies, such as Fama and Babiak (1968), report systematic differences between firms in the parameters of the Lintner functions that characterize their dividend payouts. Dewenter and Warther (1998) interpret differences in adjustment parameters as evidence of the impact of Japanese financial policies in their comparison of keiretsu and non-keiretsu firms. Fama and French (2002) use Lintner-like specifications to test the implications of the pecking order theory of capital structure. Table VII of Desai, Foley and Hines (2002) presents results from estimating separate firm-specific Lintner parameters for each multinational group in the BEA panel, reporting findings that match those obtained from regressions in which each firm is restricted to having the same parameters (which vary according to observable firm characteristics).

⁹ The basic Lintner specification in column (1) of Table 2 omits a constant term. In his original study of dividends, Lintner included a constant, but he examined the behavior of aggregate dividends, not dividends of individual firms. Subsequent research presents some evidence in favor of including a constant (see, for example, Choe (1990)) and some evidence in favor of suppressing it (see, for example, Fama and Babiak (1968)). The results presented here do not materially change if a constant is included. For an analysis of these data using a Lintner specification that includes a constant, see Desai, Foley, and Hines (2001).

¹⁰ See Altshuler and Grubert (2003) and Desai, Foley and Hines (2003).

¹¹ This exercise takes an affiliate's organizational form to be independent of its repatriation policy. Multinational firms choose whether to make their affiliates foreign branches or foreign subsidiaries; to the extent that these choices are dictated by anticipated future repatriation rates, then a comparison of repatriation rates between affiliates with different organizational forms will overstate the impact of tax rate differences. Other characteristics differ between branches and subsidiaries that could be correlated with tax rates and repatriation proclivities. Branch affiliates are concentrated in certain industries, including petroleum, wholesale trade, and services, though not entirely; in the 1997 sample, 26.4 percent of branch affiliates were in non-petroleum manufacturing, compared with 52.1 percent of incorporated affiliates. While the geographic distribution of branches and subsidiaries was not identical, the median foreign tax rate paid by branch affiliates in 1997 was 30.4 percent, compared to 31.1 percent for incorporated affiliates. Based on this information there is no strong reason to suspect that a comparison of the repatriation patterns of branches and subsidiaries would encounter difficulties due to spurious correlation with local tax rates.

¹² Indirect ownership as defined in these regressions corresponds to zero direct ownership by the parent company. Changing the dummy variable to indicate any nonzero indirect ownership does not change the results.

¹³ Affiliates with negative net income are excluded for the purposes of calculating country tax rates. Desai, Foley, and Hines (2001) provide a complete description of the properties of country tax rates and alternative methods of their calculation.

¹⁴ The U.S. Tax Reform Act of 1986 changed the way in which foreign tax credits were calculated, as a result of which, firms faced stronger incentives to adjust their dividend repatriations in response to transitory tax rate changes before 1986 than they did after 1986. Additional regressions (available from the authors) indicate that repatriations responded more sharply to tax differences in the years before 1986 than they did after 1986.

¹⁵ Desai, Foley and Hines (2001) note that tax incentives may vary between affiliates located in the same country. Incorporating this variation, along with instrumenting for the affiliate tax rate with a country tax rate, provides an additional test of the tax motivations of dividend policy inside the firm – although the results are largely unchanged.

¹⁶ Some countries also impose small withholding taxes on repatriations from foreign subsidiaries and foreign branches. Using the BEA data to measure the magnitude of these withholding tax rates, and adding withholding taxes as separate independent variables, produces results (available from the authors) that indicate that withholding taxes discourage repatriations, though the effects of other variables closely resemble those reported in the paper.

¹⁷ See Hines (1996), who reports that \$1 of foreign profitability has 3-4 times the effect on dividend payments to common shareholders than does \$1 of domestic profitability. Hines attributes the difference to the use of dividends to signal profitability, which may be more difficult for the market to verify in the case of foreign earnings; Bodnar and Weintrop (1997) attribute the same phenomenon to the greater growth prospects of foreign earnings.

¹⁸ Values of q are measured as the ratio of the book value of assets plus the difference of market and book values of equity to the book value of assets. These firm-level q 's are categorized into three-digit BEA industry categories, and the median firm value of q within an industry is the industry level q . Firm-level regressions (not reported) of domestic investment on this measure of q provide a positive and significant coefficient on q .

¹⁹ While it is possible that such non-Compustat firms are not privately held but are instead foreign-based and therefore not listed on an American exchange, manual inspection of the data suggest that this is rarely the case.

²⁰ Desai, Foley and Hines (2002) report similar patterns in their analysis of the impact of ownership transitions, as when private firms are taken public and publicly owned firms are taken private in leveraged buyouts. Neither type of ownership transition appears to be associated with significant changes in dividend policies.

²¹ See, for example, Lang, Ofek and Stulz (1996).

²² The 70.9% target payout ratio is calculated as $(0.2729+0.1074)/(1-0.4633)$. A comparison of leverage ratios from zero to one encompasses ninety-five percent of the sample.

²³ The q measure of investment opportunities is derived from firm-level data and, as a consequence, captures firm worldwide investment opportunities rather than merely domestic investment opportunities. Since the majority of investment and business activity by American firms is domestic, it follows that measured q primarily reflects domestic opportunities, but it is possible that high values of q could be associated with greater desired foreign investment, which would reduce the incentive to repatriate funds from abroad, and reduce the effect of investment opportunities on repatriations as measured in Table 6.

²⁴ In these specifications, tax rates are averaged across all years for which the affiliate is in the sample. As a consequence, measurement of relative tax incentives is somewhat noisy.

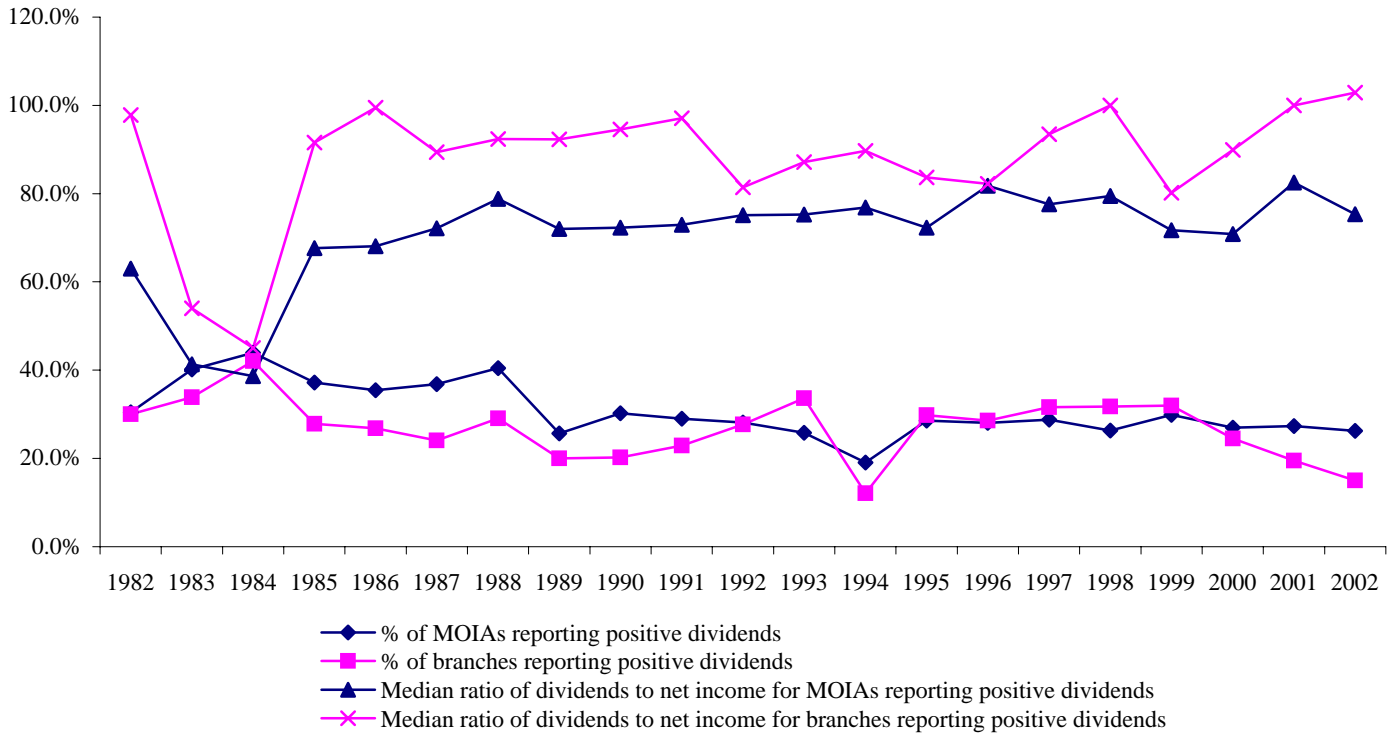
²⁵ All affiliates in the sample are majority-owned, so partial ownership is defined as more than 50 percent but less than 100 percent ownership.

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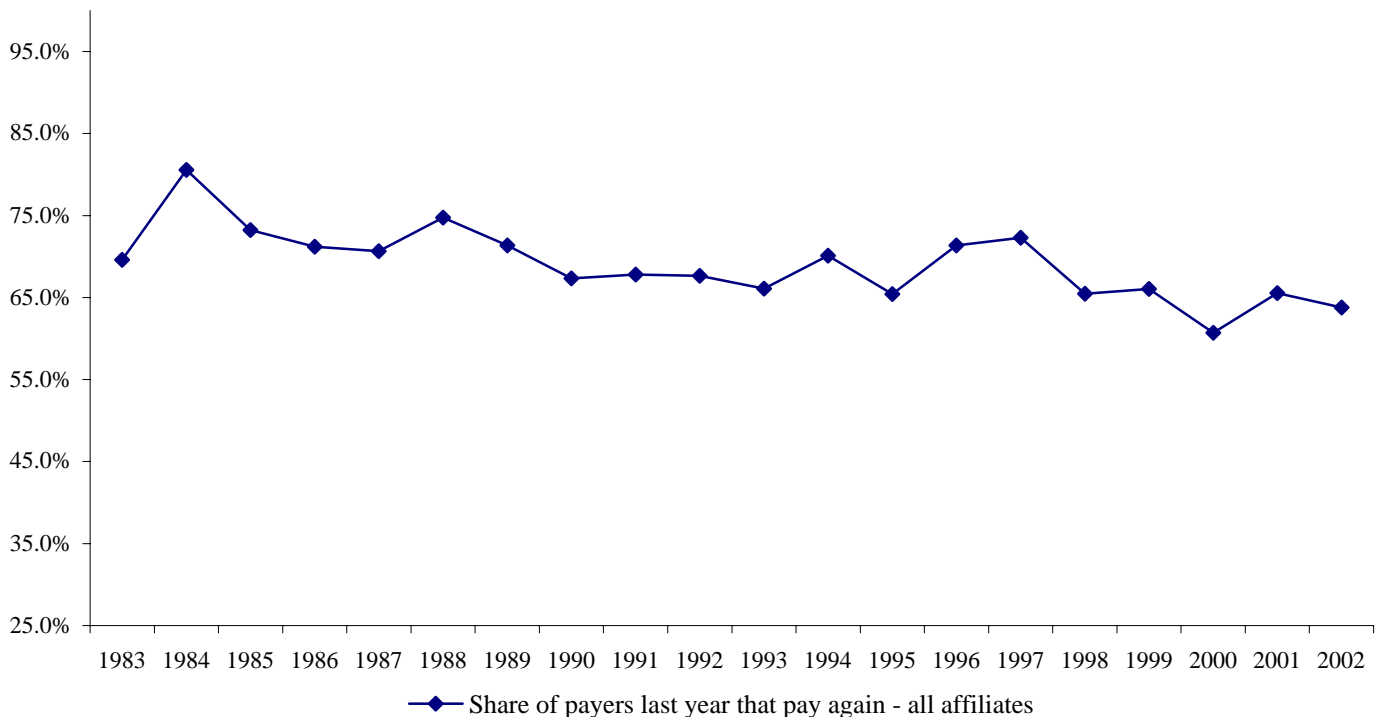
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Figure 1: Propensity to pay dividends for majority-owned incorporated affiliates (MOIAs) and branches, 1982-2002



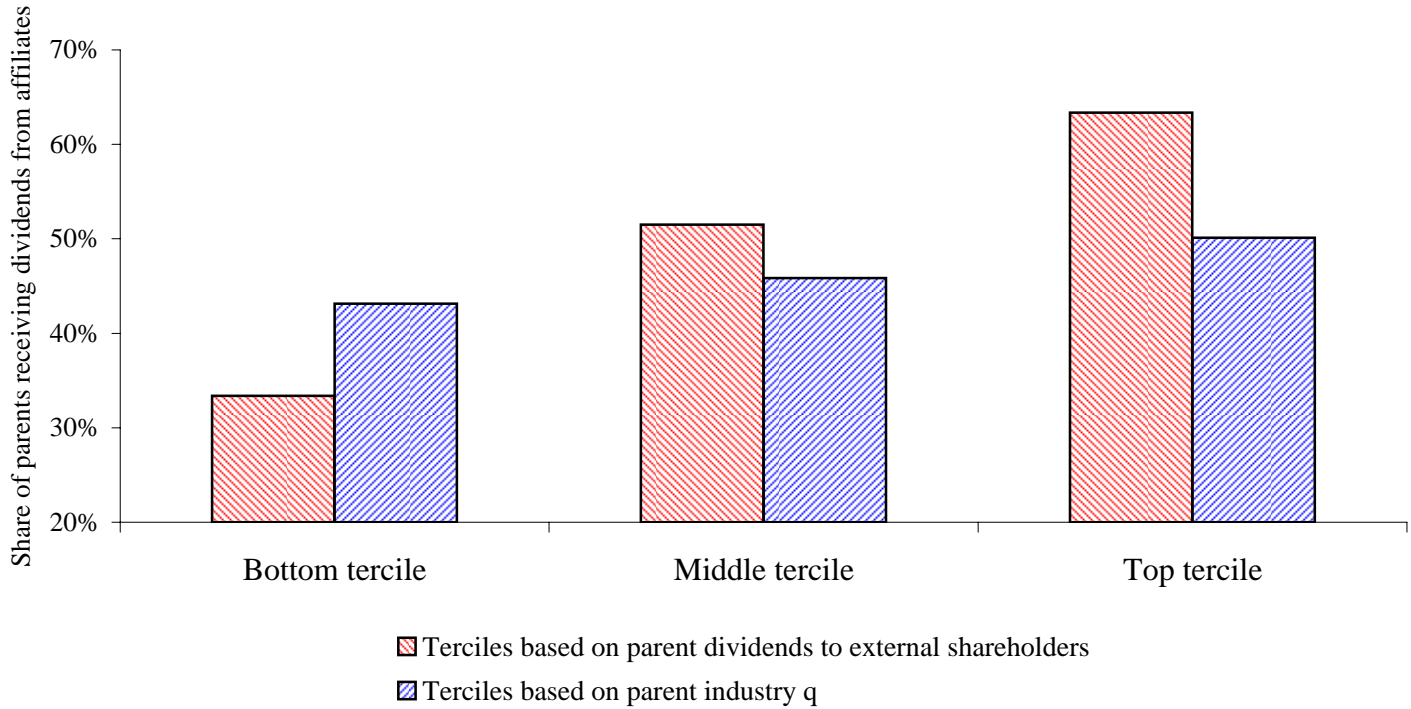
Note: Diamonds and squares indicate fractions of entities remitting dividends for majority owned incorporated affiliates and branches, respectively. Triangles and Xes depict median ratios of dividends to net income for majority owned incorporated affiliates and branches, respectively.

Figure 2: Persistence of dividend payments, 1983-2002



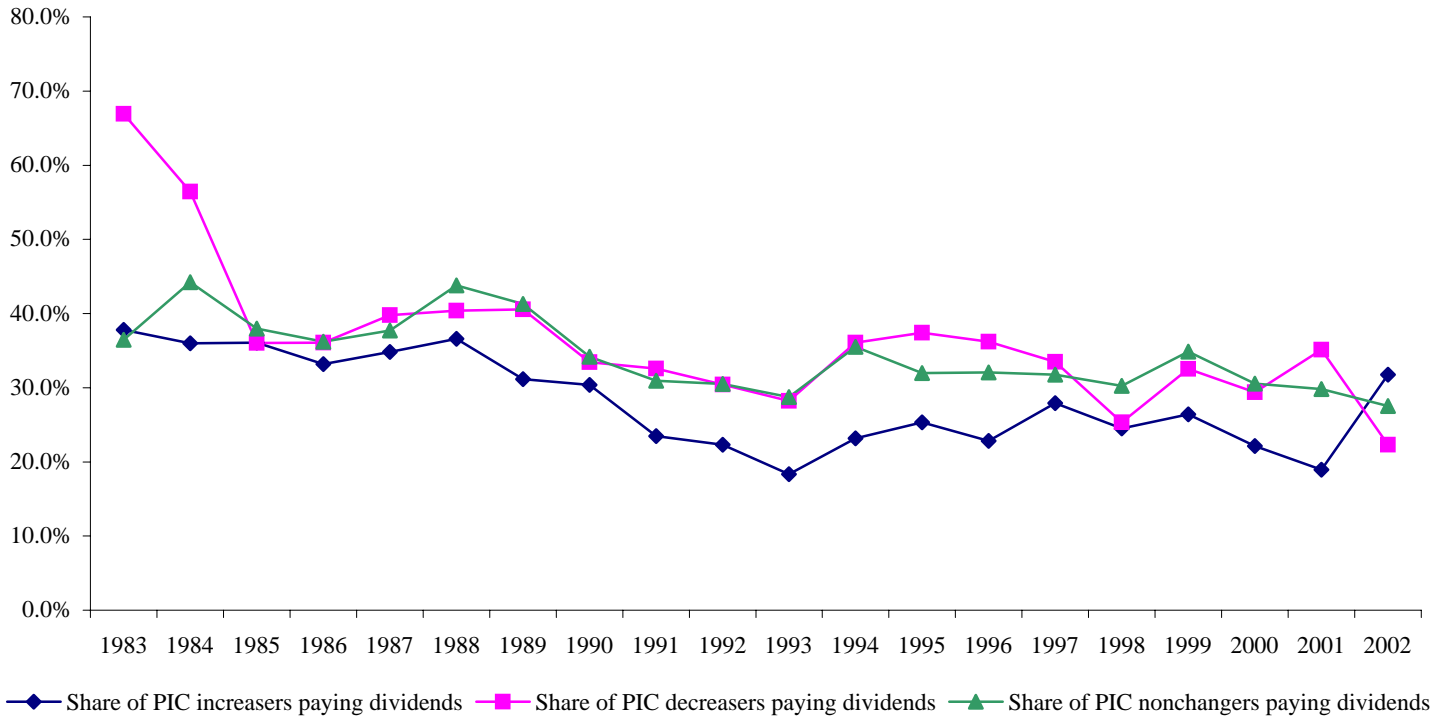
Note: The line depicts the ratio of the number of entities remitting dividends in year t to the number of entities remitting dividends in year t-1 who also report activity in year t.

Figure 3: Repatriation Policies and Parent Financing Needs



Notes: The figure presents the share of parents receiving dividends from affiliates within tertiles. The left column for each tertile corresponds to a grouping of firms based on the ratio of parent dividends to shareholders to parent net income. The right column for each tertile corresponds to a grouping of firms based on parent industry q.

Figure 4: Propensity to Pay Dividends, by Changes in Paid-In-Capital, 1983-2002



Note: This figure tracks the share of dividend payers for 3 subsets of majority-owned incorporated affiliates: (i) those experiencing increases of PIC >5%; (ii) those experiencing decreases of PIC >5%; and (iii) all others.

Table 1
Descriptive Statistics

	<u>Mean</u>	<u>Median</u>	<u>Std. Dev.</u>
<i><u>Panel A: Affiliate-level data for Tables 2-5</u></i>			
Dividend Payments by Affiliates to Parents	6,677	0	47,127
Net Income	7,580	1,773	25,572
Capital Expenditures	9,064	985	41,192
Branch Dummy	0.0646	0.0000	0.2458
Indirect Ownership Dummy	0.1594	0.0000	0.3661
Parent Dividends to Shareholders Interacted with Relative Assets	4,451	749	18,692
<i><u>Panel B: Parent-level data for Table 6</u></i>			
Aggregate Dividend Payments by Affiliates to Parents	39,308	0	227,059
Aggregate Net Income	58,534	4,964	297,093
Parent Leverage	0.5699	0.5555	0.2600
<i><u>Panel C: Affiliate-level data for columns 1-3, Table 7</u></i>			
Percent of Affiliate Dividend Payments that are Positive	0.2880	0.2000	0.3054
Country Tax Rate	0.3277	0.3436	0.1176
Partial Ownership Dummy	0.1893	0.0000	0.3917
Log of GDP Per Capita	9.4158	9.8016	0.9382
<i><u>Panel D: Affiliate-level data for columns 4-6, Table 7</u></i>			
Dummy For Payment of Dividend by Affiliates when Paid-in Capital Increases	0.2821	0.0000	0.4501
Country Tax Rate	0.3328	0.3415	0.1141
Partial Ownership Dummy	0.1227	0.0000	0.3281
Log of GDP Per Capita	9.4077	9.7986	0.9409

Note: Panel A presents descriptive statistics for the affiliate-level panel of annual data from 1982 to 2002 that are analyzed in Tables 2-5. Measures of dividends, net income and capital expenditures are in thousands of nominal U.S. dollars. Branch Dummy is equal to one for affiliates that are organized as branches, and Indirect Ownership Dummy is equal to one for separately incorporated affiliates for which the parent holds an indirect ownership claim. Parent Dividends to Shareholders Interacted with Relative Assets is the interaction of parent dividends to common shareholders as reported in Compustat and the ratio of affiliate assets to consolidated firm assets as reported in Compustat. Panel B presents descriptive statistics of parent-level annual data used in the analysis presented in Table 6. Dividend payments by affiliates to parents and affiliate net income are aggregated across affiliates within parent systems. Panel C displays affiliate-level data that are studied in columns 1-3 of Table 7. The Percent of Affiliate Dividend Payments is computed across all years an affiliate appears in the sample. Measures of country tax rates and the log of GDP per capita are averages of these variable for a particular affiliate across years in which the affiliate appears in the sample. The Partial Ownership Dummy is equal to one if the affiliate is ever partially owned. Panel D presents sample statistics for the subsample of the sample described in Panel C for which parents increase their paid-in capital in the affiliate. Results of analyzing these data appear in columns 4-6 of Table 7.

Table 2
Lintner Dividend Specifications for Affiliate Payments to Parents

Dependent Variable: Dividend Payments by Affiliates to Parents				
	(1)	(2)	(3)	(4)
Net Income	0.3694 (0.0177)	0.3585 (0.0183)	0.3019 (0.0201)	0.2843 (0.0186)
Lagged Dividend Payments	0.2263 (0.0328)	0.2139 (0.0334)	0.1136 (0.0359)	0.2267 (0.0339)
Fixed Effects?	No	Yes-Parent	Yes-Affiliate	No
OLS or Tobit?	OLS	OLS	OLS	OLS
R- Squared	0.3358	0.3236	0.4378	
Log-Likelihood				-435969
No. Obs	102,380	102,380	102,380	102,380
Payout Ratio	0.48	0.46	0.34	0.37
Adjustment Parameter	0.77	0.79	0.89	0.77

Note: The dependent variable in all specifications is the dollar value of dividend payments by majority-owned affiliates. "Net Income" is the after-foreign tax net income of the affiliate. "Lagged Dividend Payments" is the dollar value of dividend payments by the affiliate in the previous year. Column 1 presents an OLS specification without fixed effects. Column 2 presents an OLS specification with parent fixed effects. Column 3 presents an OLS specification with affiliate fixed effects. In columns 1 through 3, heteroskedasticity-consistent standard errors are presented in parentheses. Column 4 presents a Tobit specification with standard errors presented in parentheses.

Table 3
Dividend Payments, Capital Expenditures, and Local Debt

Dependent Variable: Dividend Payments by Affiliates to Parents						
	(1)	(2)	(3)	(4)	(5)	(6)
Net Income	0.3613 (0.0174)	0.3523 (0.0181)	0.3265 (0.0248)	0.3167 (0.0256)	0.3195 (0.0244)	0.3115 (0.0253)
Lagged Dividend Payments	0.2232 (0.0330)	0.2113 (0.0336)	0.2232 (0.0535)	0.2117 (0.0546)	0.2212 (0.0538)	0.2101 (0.0548)
Capital Expenditures	0.0207 (0.0081)	0.0192 (0.0085)			0.0203 (0.0126)	0.0182 (0.0129)
High Local Debt Dummy Interacted with Net Income			0.0979 (0.0354)	0.0943 (0.0358)	0.0975 (0.0351)	0.0939 (0.0355)
High Local Debt Dummy Interacted with Lagged Dividend Payments			0.0027 (0.0641)	0.0014 (0.0643)	0.0015 (0.0644)	0.0002 (0.0646)
High Local Debt Dummy Interacted with Capital Expenditures					-0.0043 (0.0159)	-0.0028 (0.0160)
Parent Fixed Effects?	No	Yes	No	Yes	No	Yes
R-Squared	0.3364	0.3241	0.3392	0.326	0.3397	0.3263
No. Obs	101,913	101,913	98,272	98,272	97,805	97,805

Note: The dependent variable in all specifications is the dollar value of dividend payments by majority-owned affiliates to parents. "Net Income" is the after-foreign tax net income of the affiliate. "Lagged Dividend Payments" is the dollar value of dividend payments by the affiliate in the previous year. "Capital Expenditures" is the dollar value of capital expenditures performed by the affiliate. The "High Local Debt Dummy" is computed by first calculating the ratio of an affiliate's local debt to its assets. An affiliate that has a ratio higher than the median in its industry in a particular year is assigned a value of one while an affiliate with a ratio below the median is assigned a value of zero. Columns 1, 3, and 5 present OLS specifications without fixed effects. Columns 2, 4, and 6 present OLS specifications with parent fixed effects. Heteroskedasticity-consistent standard errors are presented in parentheses.

Table 4

Lintner Dividend Specifications for Affiliates, The Impact of Tax Factors

Dependent Variable: Dividend Payments by Majority-Owned Affiliates						
	(1)	(2)	(3)	(4)	(5)	(6)
Net Income of Affiliate	0.3630 (0.0181)	0.2458 (0.0309)	0.3536 (0.0192)	0.2387 (0.0320)	0.2297 (0.0199)	0.1096 (0.0375)
Lagged Dividend Payments	0.2701 (0.0277)	0.2635 (0.0276)	0.2507 (0.0279)	0.2447 (0.0277)	0.2791 (0.0301)	0.2729 (0.0300)
Interaction of Branch Dummy and Net Income	0.0425 (0.0503)	0.0666 (0.0692)	0.0287 (0.0496)	0.0647 (0.0696)	0.0376 (0.0620)	0.0836 (0.0899)
Interaction of Indirect Ownership Dummy and Net Income	-0.0018 (0.0339)	0.1413 (0.0547)	-0.0063 (0.0350)	0.1537 (0.0565)	0.0345 (0.0399)	0.2052 (0.0656)
Interaction of Branch Dummy and Lagged Dividend Payments	-0.1317 (0.0911)	-0.1249 (0.0916)	-0.1237 (0.0865)	-0.1169 (0.0872)	-0.1369 (0.0978)	-0.1297 (0.0985)
Interaction of Indirect Ownership Dummy and Lagged Dividend Payments	-0.0475 (0.0637)	-0.0413 (0.0632)	-0.0333 (0.0654)	-0.0280 (0.0647)	-0.0538 (0.0679)	-0.0482 (0.0671)
Interaction of Country-Tax Rate and Net Income		0.4085 (0.1098)		0.4008 (0.1149)		0.4151 (0.1324)
Interaction of Country-Tax Rate, Net Income, and Branch Dummy		-0.0469 (0.2185)		-0.0908 (0.2247)		-0.1270 (0.2830)
Interaction of Country-Tax Rate, Net Income, and Indirect Ownership Dummy		-0.5058 (0.1999)		-0.5682 (0.2066)		-0.6052 (0.2372)
Parent Fixed Effects? OLS or Tobit?	No OLS	No OLS	Yes OLS	Yes OLS	No Tobit	No Tobit
R-Squared	0.3184	0.3207	0.2996	0.3017		
Log-Likelihood					-405,651	-405,029
No. Obs	94,375	94,180	94,375	94,180	94,375	94,180

Note: The dependent variable in all specifications is the dollar value of dividend payments by majority-owned affiliates. "Net Income of Affiliate" is the after-foreign tax net income of the affiliate. "Lagged Dividend Payments" is the dollar value of dividend payments by the affiliate in the previous year. "Interaction of Country Tax Rate and Net Income" is the product of the annual median tax rate paid by affiliates in a host country and "Net Income of Affiliate." "Branch Dummy" takes a value of one if the affiliate is organized as a branch, and zero otherwise. "Indirect Ownership Dummy" takes a value of one if the affiliate is one hundred percent indirectly owned, and zero otherwise. The interaction terms interact "Branch Dummy" and "Indirect Ownership Dummy" with "Net Income of Affiliate," "Lagged Dividend Payments," and "Interaction of Country-Tax Rate and Net Income." Columns 1 and 2 present OLS specifications without fixed effects. Columns 3 and 4 present OLS specifications with parent fixed effects. In columns 1 through 4, heteroskedasticity-consistent standard errors are presented in parentheses. Columns 5 and 6 present Tobit specifications, and standard errors appear in parentheses.

Table 5

The Impact of Ownership and Parental Dividend Policy on Affiliate Dividend Policy

Dependent Variable: Dividend Payments by Affiliates to Parents

	<i>Affiliates of non- Compustat Firms</i>	<i>Affiliates of Compustat Firms</i>	<i>Affiliates of Compustat Firms</i>	<i>Affiliates of non- Compustat Firms</i>	<i>Affiliates of Compustat Firms</i>	<i>Affiliates of Compustat Firms</i>	<i>Affiliates of non- Compustat Firms</i>	<i>Affiliates of Compustat Firms</i>	<i>Affiliates of Compustat Firms</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Net Income of Affiliates	0.3143 (0.0255)	0.3827 (0.0200)	0.3565 (0.0212)	0.2944 (0.0261)	0.3760 (0.0206)	0.3542 (0.0218)	0.1993 (0.0273)	0.3012 (0.0210)	0.3516 (0.0258)
Lagged Dividend Payments	0.2010 (0.0385)	0.2561 (0.0373)	0.2483 (0.0369)	0.1732 (0.0397)	0.2454 (0.0379)	0.2393 (0.0375)	0.1861 (0.0404)	0.2603 (0.0388)	0.2726 (0.0404)
Parent Dividends to Shareholders Interacted with Relative Assets			0.1423 (0.0374)			0.1334 (0.0410)			-0.2559 (0.0583)
Parent Fixed Effects? OLS or Tobit?	No OLS	No OLS	No OLS	Yes OLS	Yes OLS	Yes OLS	No Tobit	No Tobit	No Tobit
R-Squared	0.2248	0.3746	0.3776	0.2570	0.3592	0.3616			
Log-Likelihood							-99,124	-336,537	-336,040
No. Obs.	26,344	76,034	75,868	26,344	76,034	75,868	26,344	76,034	75,868

Note: The dependent variable in all specifications is the dollar value of dividend payments by majority-owned affiliates of non-Compustat firms (columns 1, 4 and 7) and for majority-owned affiliates of Compustat firms (columns 2, 3, 5, 6, 8, and 9). "Net Income of Affiliate" is the after-foreign tax net income of the affiliate in the same year. "Lagged Dividend Payments" is dollar value of dividend payments by the affiliate in the previous year. "Parent Dividends to Shareholders Interacted with Relative Assets" is the product of parent dividends to shareholders with the ratio of affiliate assets to total consolidated assets of the parent. The sample in columns 1, 4 and 7 is restricted to those affiliates without parents listed by Compustat, while the sample in all other columns is all affiliates with parents listed by Compustat. Columns 1, 2 and 3 present OLS specifications without fixed effects. Columns 4, 5 and 6 present OLS specifications with parent fixed effects. In columns 1 through 6, heteroskedasticity-consistent standard errors are presented in parentheses. Columns 7, 8, and 9 present Tobit specifications, and standard errors appear in parentheses.

Table 6**Lintner Dividend Specifications for Aggregate Affiliate Payments to Parents**

Dependent Variable: Aggregate Dividend Payments by Affiliates to Parents				
<i>Sample:</i>	<i>Full Sample</i>		<i>Low q Sample</i>	<i>High q Sample</i>
	(1)	(2)	(3)	(4)
Aggregate Net Income	0.3260 (0.0046)	0.2729 (0.0101)	0.4555 (0.0168)	0.1989 (0.0148)
Aggregate Net Income * Parent Leverage		0.1074 (0.0181)	-0.0236 (0.0290)	0.1208 (0.0274)
Aggregate Lagged Dividend Payments	0.4662 (0.0064)	0.4633 (0.0065)	0.1817 (0.0079)	0.6312 (0.0105)
Parent Fixed Effects? R- Squared	Yes 0.8304	Yes 0.8307	Yes 0.8891	Yes 0.8246
No. Obs	17,747	17,310	8,355	8,365

Note: The dependent variable in all specifications is the dollar value of dividend payments by majority-owned affiliates aggregated across affiliates in a parent system. "Aggregate Net Income" is the aggregated after-foreign tax net income of affiliates within a parent system. "Parent Leverage" is the ratio of parent firm domestic current liabilities and long term debt to parent firm domestic assets. "Aggregate Lagged Dividend Payments" is the aggregated dollar value of dividend payments by affiliates within a parent system in the previous year. All of the specifications are OLS specifications with parent fixed effects. The sample in the first two columns includes all parents in all years. Columns 3 and 4 split the sample into subsamples depending on whether a parent's industry q is below or above the sample median, respectively. Heteroskedasticity-consistent standard errors are presented in parentheses.

Table 7
Dividends and Partial Ownership

<i>Dependent Variable:</i>	Percent of Affiliate Dividend Payments that are Positive			Dummy For Payment of Dividend by Affiliates when Paid-in Capital Increases		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.2695 (0.0090)	0.2551 (0.0091)	0.5385 (0.0342)	-0.7453 (0.0390)	-0.8023 (0.0393)	-0.2011 (0.1267)
Country Tax Rate	0.0566 (0.0262)	0.0465 (0.0260)	0.0767 (0.0296)	0.5093 (0.1102)	0.4836 (0.1100)	0.6394 (0.1201)
Partial Ownership Dummy		0.0934 (0.0083)	0.0851 (0.0084)		0.4861 (0.0352)	0.4489 (0.0365)
Log of GDP Per Capita			-0.0310 (0.0036)			-0.0695 (0.0137)
No. Obs.	10,513	10,513	10,162	12,090	12,090	11,825
Log-Likelihood				-7,188	-7,094	-6,748
R-squared	0.0005	0.0148	0.0236			

Note: The sample in columns 1-3 consists of all affiliates that report dividends five or more times. The dependent variable in columns 1-3 is the share of reported dividend payments that are positive. In columns 1-3, "Country Tax Rate" is the median tax rate in the country in which an affiliate is located averaged over all years that affiliate appears in the sample. "Partial ownership dummy" takes the value of one if the affiliate is not wholly-owned in any of the years the affiliate appears in the sample. "Log of GDP per capita" is the log value of GDP per capita averaged over all years the affiliate appears in the sample. The sample in columns 4-6 consists of those affiliate-years where a parent increases the paid-in-capital of the affiliate. The dependent variable in columns 4-6 is a dummy that takes the value one if the affiliate pays a dividend in that year, and is zero otherwise. In columns 4-6, time-varying measures of the independent variables are used. Heteroskedasticity-consistent standard errors are presented in parentheses.