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ABSTRACT

This paper analyzes dividend remittances by a large panel of foreign affiliates of U.S. multinational firms. The dividend policies of foreign affiliates, which convey no signals to public capital markets, nevertheless resemble those used by publicly held companies in paying dividends to diffuse common shareholders. Robustness checks verify that dividend policies of foreign affiliates are little affected by the dividend policies of their parent companies or parent company exposure to public capital markets. Systematic differences in the payout behavior of affiliates that differ in organizational form, and those that face differing tax costs of paying dividends, reveal the importance of tax factors; nevertheless, dividend policies are not solely determined by tax considerations. The absence of capital market considerations and the incompleteness of tax explanations together suggest that dividend policies are largely driven by the need to control managers of foreign affiliates. Parent firms are more willing to incur tax penalties by simultaneously investing funds while receiving dividends when their foreign affiliates are partially owned, located far from the United States, or in jurisdictions in which property rights are weak, all of which are implied by control theories of dividends.

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1. Introduction

A major impediment to understanding corporate dividend policy is the availability of multiple plausible explanations for observed behavior. Miller and Modigliani (1961) clarified the theoretical setting of this problem by showing that, absent informational asymmetries, transaction costs, or tax considerations, the payout behavior of firms should not affect share valuation by investors. It follows from these assumptions that the dividend policies of value-maximizing firms might take almost any form, rendering them apparently random to outside observers. In practice, corporate dividend policy instead appears to have strongly predictable components, with firms gradually adjusting dividends to target levels that reflect current earnings. Consequently, much of the modern literature is devoted to identifying the extent to which informational asymmetries between owners and managers, transaction costs, or tax considerations account for corporate payout policies.

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. Dividends represent gross flows from corporations to their shareholders, so to the extent that owners dictate dividend policy, they can use dividends to wrest resources from the control of managers. Corporate managers with discretion to select dividend levels can also use dividends to send credible profitability signals to the capital market. Both of these uses of dividends address needs that stem from imperfect monitoring and information flow between owners and managers. Since corporate control problems and capital market signaling carry similar

empirical implications for dividend payments, it can be difficult to distinguish between them empirically.

This paper examines the dividend puzzle in a somewhat novel context: dividend policy inside the firm. The empirical work considers the determinants of dividend remittances from foreign affiliates of American multinational corporations to their domestic parent companies. The objectives of this study are to estimate the process governing dividend remittances from foreign affiliates, compare it to the policies that firms use in paying dividends to common shareholders, and to use this comparison to identify common factors in all dividend policies. Dividend 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 payment of a dividend by an incorporated foreign affiliate to its U.S. parent company triggers a U.S. tax liability, as does the payment of a corporate dividend to taxable common shareholders. Both types of dividend policies may reflect the concerns of shareholders with limited ability to monitor and control the behavior of managers, and who do so in part with regularized dividend payments. One notable feature of dividend policy inside the firm is the smaller role of informational problems that lie at the core of signaling explanations of the dividend policies of firms with more diffuse owners. By studying dividend payments in a setting in which there is very limited scope for signaling, it is possible to identify the extent to which other considerations, such as agency problems, are responsible for observed dividend patterns.

The results indicate that dividend remittances from affiliates to parents and dividend payments from parents to shareholders share a number of common features. Multinational firms behave as though they select target payout ratios for their foreign affiliates, gradually adjusting payouts over time in response to changes in earnings. This behavior bears a striking resemblance

to the process by which domestic firms pay dividends to common shareholders, a pattern first described by John Lintner (1956).

The similarity of dividend policy inside firms and between firms and shareholders could reflect capital market concerns, since corporations paying dividends to common shareholders – in efforts to signal profitability, for example – might need to draw on funds from foreign affiliates, thereby triggering repatriations. This possibility is considered by comparing the dividend behavior of affiliates of publicly and privately held parent firms, by investigating changes in the dividend behavior of affiliates whose parents undergo ownership conversions through leveraged buyouts or initial public offerings, and by introducing controls for parental dividend payouts. All of these comparisons indicate that the capital market settings and dividend policies of parent companies have insignificant effects on the dividend policies of foreign affiliates.

Tax considerations have obvious potential to influence dividend payments to common shareholders, since dividends trigger tax obligations that might otherwise be deferred or avoided. Similarly, tax considerations influence the choice of dividend payouts by foreign affiliates. Fortunately, it is possible to measure the impact of these tax considerations by comparing the behavior of foreign affiliates subject to different foreign tax rates, and those with different organizational forms (subsidiaries and branches) that create differing tax incentives to remit dividends. The evidence indicates that firms pursue dividend payout policies designed in part to minimize tax obligations. However, as with dividend payouts between firms and shareholders, tax minimization cannot explain much of observed dividend policies inside firms.

The need to control corporate managers is often invoked to explain the existence of large and frequent dividend payments from corporations to common shareholders. Shareholders who

lack complete information on the state of firm investments and who are reluctant to trust managers might insist on regular dividend payments as a method of extracting value from an otherwise-reticent management. Recent literature on the conglomerate discount and the process of capital allocation within firms suggests that similar incentive problems exist within firms as well. A multinational firm's central management may use financial flows within the firm to evaluate the financial prospects and needs of far-flung foreign affiliates and to judge the reliability of foreign managers. As a result, it may be sensible to use dividend payments to control managers as well as to extract returns on investments, much as public shareholders may use dividends to monitor and control their firms.

Evidence of the role of control considerations in dividend policies appears both in the inability of tax and signaling models to account for observed behavior, and in direct tests of the implications of control theories. Foreign affiliates are equally likely to increase or reduce dividend payments, or to initiate or omit dividends, neither of which is characteristic of dividend payments to common shareholders, nor are they consistent with the implications of signaling models. Dividends from foreign affiliates adjust to desired levels at faster speeds than do dividends paid by parent firms to common shareholders, suggesting that the signaling explanations offered for slow adjustment are less relevant for dividends inside firms. Affiliates in situations in which control is problematic – those that are partially owned, that are located very far from the United States, or in countries with weak legal protections – are the most likely to remit dividends while simultaneously receiving parent transfers, thereby incurring avoidable tax costs as the price of forcing dividend remittances. All of this evidence is consistent with control motives for dividend policy inside the firm.

While dividend policy inside multinational firms has considerable significance for managers, the ability to study the practice of dividend policy inside firms has been limited by the absence of accessible data. This paper investigates the financial behavior of a large panel of foreign affiliates and their American parent companies for every year between 1982 and 1997. This evidence sheds light on the dynamics of capital allocation inside firms and the ways in which incentive problems inside firms influence financial policy. Empirical efforts to understand incentive problems within firms typically rely on market perceptions of investment distortions – such as the conglomerate discount – to which it is now possible to add evidence of costly changes in financial policy that address the same incentive problems. The fact that patterns of behavior observed in dividend policy with common shareholders also exist in settings not characterized by diffuse shareholders, and therefore those in which signaling explanations have little scope, suggests that explanations of the dividend puzzle associated with agency explanations offer the greatest promise.

Section two of the paper summarizes tax and non-tax motivations for dividend policy with a particular emphasis on the determinants of dividend policy inside the firm. Section three describes the data and provides some descriptive statistics. Section four analyzes the dividend policies of foreign affiliates and their parent companies, including any means by which they may influence each other. Section five is the conclusion.

2. Corporate motivation for dividend policies

This section reviews the incentives firms face in selecting their dividend policies, and the available evidence concerning dividend behavior. The evidence comes in two distinct forms. The first is evidence of the behavior of domestic companies paying dividends to common

shareholders; these studies focus on non-tax factors that influence payout behavior. The second is evidence of factors that influence repatriations from foreign affiliates, and these studies focus almost exclusively on tax considerations. Taken together, this evidence covers many of the factors that are likely to influence dividend policy inside the firm.

2.1. The design of dividend policies inside and outside the firm

Dividend payments to common shareholders exhibit regular patterns first described by Lintner (1956). On the basis of interviews with corporate executives, Lintner concluded that firms select target payout ratios to which they gradually adjust actual dividend payments over time. His empirical analysis of aggregate U.S. dividend behavior was consistent with this model of the dividend process, in that both current earnings and lagged dividends positively influence current dividends. This pattern, together with the considerable attention paid by managers to dividend policy, is not implied by the Miller and Modigliani (1961) analysis of firm valuation, and therefore suggests that dividends reflect considerations otherwise ruled out by their assumptions. Potential explanations for observed patterns of dividend behavior center on corporate control problems, signaling explanations, and the tax effects of paying dividends. Each of these explanations has either an analogue inside the firm or carries implications for how dividend policy inside the firm might be conducted.

When the goals of corporate managers diverge from those of shareholders, financial policies can be used to reduce agency costs. In particular, Easterbrook (1984) and Jensen (1986) emphasize that consistent dividend payments can mitigate agency conflicts by distributing investment returns and thereby reducing the scope for managerial misallocation and

appropriation of corporate resources.[1] Shleifer and Vishny (1986) and Allen, Bernardo and Welch (2000) note that institutional investors prefer to own shares of firms making regular dividend payments, and argue that large institutional investors are more willing and able to monitor corporate management than are smaller and more diffuse owners. As a result, corporate dividend policies can be tailored to attract institutional investors who in turn provide important monitoring services.

Similar control problems appear to exist inside firms and are hypothesized to influence financial policies and capital budgeting. As formulated by Bagwell and Zechner (1993), such intrafirm influence activities carry implications for optimal capital structures and financial policies. Scharfstein and Stein (2000) note that efforts to mitigate rent-seeking by divisional managers can lead to inefficient capital allocation in a multi-divisional firm. The scope and magnitude of such intrafirm problems are suggested, in part, by the findings of Lang and Stulz (1994) and Berger and Ofek (1995) who document that diversified conglomerates trade at a discount to a comparable portfolio of specialized firms. These problems have analogues inside multinational firms. Foreign managers might choose to reinvest funds in foreign affiliates despite expected returns that are objectively below acceptable thresholds; such investments are made more attractive by the possibility that they enhance managerial mobility and opportunities within the firm or in the broader labor market. The appetite for more overt perquisites by foreign

[1] There is some evidence consistent with this view. Barclay and Smith (1988) note that shareholders prefer dividends to share repurchases whenever information asymmetries imply that opportunistic managers can exploit their discretion to choose between distribution methods. They report evidence that share repurchases widen bid-ask spreads, which is implied by their model. Lang and Litzenberger (1989) find that the market reacts favorably to dividend announcements by firms with characteristics suggesting that they might otherwise overinvest their funds. But Howe, He and Kao (1992) report that firm characteristics do not influence market reactions to share repurchases and special dividends. Laporta, Lopez-de-Silanes, Shleifer and Vishny (2000) offer evidence that laws protecting the rights of minority shareholders are associated with higher dividend payout ratios, which is consistent with the use of dividends to control managerial actions. Chirinko and Phillips (1999) also conclude that agency explanations outperform alternative explanations in their study of the evolution of dividend policy at the Baby Bells.

managers may likewise require disciplining mechanisms within the firm. Under such conditions, consistent dividend policies may serve to monitor foreign managers and encourage value-maximization on their part.

Models of asymmetric information in financial markets offer alternative explanations of the regularity of dividend payments.[2] These theories imply that consistent dividend payments that may be tax-disadvantaged serve to signal firm quality in a way that financial reports and other indicators of profitability cannot. It is difficult for firms without profits to pay dividends, but given the availability of other signals of firm quality, and the tax costs associated with paying dividends, there is considerable skepticism about the likelihood that firms pay dividends in order to signal profitability.[3] One of the questions raised by signaling interpretations of dividend behavior is why firms choose to signal profitability with dividends rather than the tax-favored alternative of share repurchases.[4] Since corporate control problems and capital market signaling carry similar empirical predictions for the pattern of dividend payments, it can be difficult to distinguish empirically between these explanations.

Given that the parent-subsidiary relationship is not characterized by diffuse ownership, signaling theories carry few implications for dividend policy inside the firm. Signaling explanations typically focus on the way in which dividend announcements impact share

[2] See, for example, Ross (1977), Bhattacharya (1979), Hakansson (1982), and Miller and Rock (1985). Allen and Michaely (1995) provide a very useful survey of this literature.

[3] See, for example, Black (1976) and Crockett and Friend (1988). More recently, DeAngelo, DeAngelo and Skinner (1996) and Benartzi, Michaely and Thaler (1997) study the link between dividend changes and future earnings and find little evidence of the implications carried by signaling explanations. DeAngelo, DeAngelo and Skinner (2000) express similar skepticism based on the declining willingness of firms to pay special dividends, which are available to serve important signaling functions.

[4] This issue is considered by John and Williams (1985), Ambarish, John, and Williams (1987), Ofer and Thakor (1987), Williams (1988), Bernheim (1991), and Bernheim and Wantz (1995). They analyze situations in which shareholders of profitable firms prefer to incur tax costs associated with dividends rather than take the chance of tendering their shares at prices below true values (which are known to managers but not to shareholders).

valuation in public markets where investors have large numbers of alternative investment opportunities. These environmental features do not have direct analogues inside the firm. In addition, in the sample analyzed below, parent companies own at least 50 percent and usually 100 percent of the equity of their affiliates. As a result, a parent company is in a position to learn a great deal about its affiliate's operations. This information will be meaningful to the parent company in part because the parent usually operates domestically in the same industry as the affiliate. One possibility that must, however, be taken seriously is that a parent company's need to pay dividends to common shareholders in order to signal profitability creates pressures to repatriate dividends from foreign affiliates, and that dividend policy inside the firm simply reflects these pressures.

Finally, it is important to reconcile observed behavior with the possible tax penalties associated with paying dividends. Under U.S. law, individual shareholders owe taxes on dividend receipts, while they are not taxed on unrealized capital gains. If firms reinvest their profits instead of paying dividends then shareholders receive their returns in the tax-preferred form of capital gains. There are, however, two important scenarios in which the tax treatment of dividends need not discourage dividend payments by firms concerned about after-tax returns to domestic shareholders. The first is that dividends are effectively taxed at the same rate as capital gains, which happens if shareholders are tax-exempt institutions or traders whose capital gains are taxed at the same rate as ordinary income.[5] The second scenario is one in which corporations

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Jagannathan, Stephens and Weisbach (2000) and Guay and Harford (2000) offer recent evidence of the prevalence of stock repurchases, their transitory nature, and the favorable stock market reaction to repurchase announcements.

[5] See Miller and Scholes (1978, 1982). Evidence from ex-dividend day price and volume movements is mixed: Gordon and Bradford (1980), Miller and Scholes (1982), Michaely (1991), and Eades, Hess and Kim (1994) find little effect of dividend taxes on share prices, and Richardson, Sefcik and Thompson (1986) report little effect on trading volume, while Elton and Gruber (1970), Litzenberger and Ramaswamy (1979), Kalay (1982), Poterba and Summers (1984, 1985), and Barclay (1987) report significant price effects. Miller and Scholes (1978) also argue

must eventually pay dividends in order to permit shareholders to receive returns from their investments.[6] Since many practical situations are not covered by either of these two scenarios, it follows that dividend payments are likely to be discouraged by heavy taxation of dividend income.[7] The falling fraction of American companies paying dividends documented in Fama and French (2000a) may reflect a growing awareness of this fact.

The tax consequences of paying dividends outside the firm have a direct analogue inside the multinational firm.[8] 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 remittances 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

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that dividend income is effectively untaxed if it raises the (binding) limit on individual interest expense deductions, an empirical claim the significance of which is challenged by Feenberg (1981).

[6] See King (1977), Auerbach (1979), and Bradford (1981). In these "new view" or "tax capitalization" models, dividends are used to dispose of residual funds once profitable investments are exhausted, so dividend taxation at unchanging rates does not affect dividend payouts. This scenario rules out nondividend methods of transmitting profits to shareholders, such as share buybacks, which have grown over time (Bagwell and Shoven, 1989; Fama and French, 2000a).

[7] Feldstein (1970), King (1977), and Poterba and Summers (1985) report negative correlations between dividend tax rates and dividend payouts in aggregate quarterly British time series. Poterba (1987) and Hines (1996) report similar results in annual aggregate U.S. data. It should be noted, however, that other studies – such as Auerbach (1982) and Marsh and Merton (1987) – that do not include the tax cost of paying dividends also report reasonably good fits for aggregate annual U.S. data. Perez-Gonzalez (2000) offers evidence that firms with large individual shareholders are more likely than others to adjust dividends in response to changes in individual tax rates on dividend income. Poterba (2001) provides a recent survey of this literature.

difference against U.S. tax liabilities on other foreign income. A notable exception to this treatment is that the dividend flows of *unincorporated* foreign branch affiliates do not trigger any particular U.S. tax consequences, as U.S. taxes are due on foreign branch income as earned, regardless of whether or not dividends are paid.

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.[9] The incentive to defer repatriation is of course 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.[10]

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 (forthcoming) note that firms can avoid

[8] Appendix I and Desai, Foley and Hines (2001) offer more comprehensive reviews of the details of international tax rules for U.S. multinationals and their implications for dividend policy.

[9] 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.

[10] 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. Of course, there is ample evidence (see Altshuler, Newlon and Randolph (1995)) that conditions do change over time, thereby making it attractive to repatriate dividends first from low-tax foreign locations. 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

repatriation tax liabilities by investing foreign profits in other foreign affiliates rather than repatriating profits to domestic parent companies. Such investment strategies produce triangular and multiple-tiered ownership structures in which affiliates invest to obtain minority interests in other foreign affiliates that are typically owned by other members of the controlled group, including a combination of other foreign affiliates and parent companies. Dividends paid by these affiliates indirectly owned by other foreign affiliates need not trigger repatriation tax liabilities, since the dividends are not received by entities residing in the United States.

2.2. The Lintner dividend model

The Lintner model of dividend payouts is one in which firms reconcile potentially conflicting goals of choosing dividends that are appropriate for current conditions while maintaining dividends close to their historic levels. The Lintner model is consistent with the following specification of firm objectives:

$$\Psi = \gamma_1 \left(D_{it} - k_{it} E_{it} \right)^2 + \gamma_2 \left(D_{it} - D_{it-1} \right)^2, \tag{1}$$

in which firm *i* chooses a dividend policy that minimizes Ψ. In equation (1), D_{it} is firm *i*'s dividend in period *t*, k_{it} is its target dividend payout ratio in period *t*, and E_{it} is its after-tax earnings in period *t*. γ_1 and γ_2 are parameters that are common to all firms. The first term on the right side of (1) reflects the cost that firm *i* incurs when its dividends in period *t* differ from target dividends, while the second term reflects the cost of deviating from the previous period's dividends. The quadratic specification of (1) imposes that these costs are symmetric around

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and low-tax locations. Such strategies are costly and not always available, as a result of which repatriation taxes discourage dividend remittances from affiliates, particularly those in low-tax countries.

desired dividends (in the first case) and the previous year's dividend (in the second case); the specification requires that $\gamma_1 > 0$ and $\gamma_2 > 0$.

The first term in (1) reflects the impact of tax and other economic conditions on the desirability of paying dividends out of current earnings. The parameter k_{it} is the payout rate that maximizes the present discounted value of after-tax dividends in the absence of corporate control considerations. As a general matter, k_{it} is likely to be a function of contemporaneous tax rates and other variables. The second term in (1) stems from the difficulty of maintaining appropriate incentives while permitting dividends to fluctuate with earnings. Strict adherence to target dividends gives managers strong incentives to generate sufficient cash flows to finance such dividends, and may thereby enhance profitability over the long run.

The implications of minimizing Ψ can be identified by differentiating (1) with respect to D_{it}, and setting the result to equal zero, thereby yielding:

(2) $$2\gamma_1(D_{it} - k_{it}E_{it}) + 2\gamma_2(D_{it} - D_{it-1}) = 0.$$

Equation (2) implies:

(3) $$D_{it} = \frac{\gamma_1}{(\gamma_1 + \gamma_2)} k_{it}E_{it} + \frac{\gamma_2}{(\gamma_1 + \gamma_2)} D_{it-1}.$$

Equation (3) is the basic Lintner dividend estimating framework in which $\left(\frac{\gamma_1}{\gamma_1 + \gamma_2}\right)$ corresponds to the adjustment parameter. Since the coefficients that premultiply ($k_{it}E_{it}$) and D_{it-1} are constrained to sum to one, it is possible to identify the term corresponding to k_{it} simply by estimating (3) and properly interpreting the results.

While the model developed by Lintner (1956) was based on case studies and interviews with individual executives, the accompanying empirical work analyzed aggregate time-series data for the U.S. economy. Beginning with Fama and Babiak (1968), several studies have estimated Lintner models using firm-level data. In particular, Choe (1990) analyzes long-run trends in adjustment costs and desired payout ratios, as well as the determinants of their cross-sectional variation. 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 (2000b) use Lintner-like specifications to test the implications of the pecking order theory of capital structure. Benartzi, Michaely and Thaler (1997), among others, conclude that "Lintner's model of dividends remains the best description of the dividend setting process available."

3. Data and Descriptive Statistics

The Bureau of Economic Analysis (BEA) Annual Survey of U.S. Direct Investment Abroad from 1982 through 1997 provides a panel of data on the financial and operating characteristics of U.S. firms operating abroad.[11] 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 (MNE) 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 International Investment and Trade in Services Survey Act requires that all firms larger than a certain size file

[11] Detailed information on the data collected in this survey appears in Appendix II and in Mataloni (1995).

detailed financial and operating items for each affiliate and information on the value of transactions between U.S. parents and their foreign affiliates.

Table I displays descriptive statistics from 1997 for the affiliates of U.S. parents, the consolidated activities of their parents, and a broader set of Compustat firms. In 1997, the 10,838 affiliates of U.S. multinationals featured mean assets of $157.5 million, mean net income of $9.8 million, and a mean dividend payment of $5.3 million. These affiliates are generally either separately incorporated subsidiaries or unincorporated branches. Incorporated affiliates can be majority-owned (at least 50 percent directly or indirectly owned by the U.S. parent) or minority owned. Unincorporated affiliates primarily take the form of branches. Branches are wholly owned operations in a foreign country that a U.S. person conducts in its own name. Finally, "other" organizational forms include partnerships and sole proprietorships.[12] In 1997, 86% of affiliates were majority owned incorporated subsidiaries, 9% were minority owned incorporated subsidiaries, and 4% were branches.[13] No particular industry dominates these affiliates although three sectors of ten listed - wholesale trade, chemical manufacturing, and transportation equipment manufacturing – account for nearly half of all affiliates in 1997.

[12] Since data on organizational form are only collected in benchmark years, affiliates must be assigned an organizational form in non-benchmark years. If an affiliate appears in a benchmark year (1982, 1989 and 1994), the affiliate is assigned that organizational form in subsequent non-benchmark years. If an affiliate first appears in a non-benchmark year (1983-1988 and 1990-1993), the affiliate is assigned the organizational form for those years that it reports in the first following relevant benchmark year (1989 and 1994, respectively). For affiliates appearing in the data after 1994 or affiliates that appear and disappear from the data between benchmark years, organizational form is unavailable, resulting in 6.2 percent of affiliate observations remaining unclassified.

If affiliates change organizational form frequently, this procedure would be problematic. Of those affiliates that respond to more than one benchmark survey, only 5.0 percent report more than one organizational form, suggesting that the procedure employed provides a reasonable characterization of affiliate organizational form.

[13] While not reported here, these shares have shifted over time reflecting the diminished use of branches and minority ownership over the course of the sample period. This pattern is consistent with the findings of Desai and Hines (1999) that the "basket" provisions of the Tax Reform Act of 1986 reduced the attractiveness of minority ownership to American multinational firms.

The 10,838 affiliates in the sample in 1997 are associated with 1,347 parents. There is considerable heterogeneity in the size of parent systems. Thirty-one percent of parent systems include only a single reporting affiliate, while 21 percent include more than 10 reporting affiliates. The second column of Table I provides consolidated data for the parent systems of affiliates in the sample derived from Compustat. In 1997, the mean parent had consolidated assets of $6,081 million and consolidated net income of $359 million. On average these firms pay $135 million in dividends to shareholders. Parents of affiliates in the sample are considerably larger than their affiliates and are considerably larger than the average Compustat firms as documented by comparisons between column two and column three of Table I.

Dividend payments from affiliates to their parents appear to be common, large, and persistent. Thirty two percent of affiliates report positive dividend payments and the median ratio of dividends to net income for payers is 78 percent. 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. Foreign subsidiaries and foreign branches are roughly equally likely to remit dividends, doing so with similar payout ratios.

Dividend payments exhibit strong intertemporal persistence. Seventy-two percent of affiliates that paid dividends in 1996 paid dividends again in 1997. Figure 2 displays this rate of persistence for majority owned incorporated affiliates and branches over the 1982-1997 period. This figure indicates that rates of persistence have remained high over the sample period and that there is little difference between the behavior of subsidiaries and branches despite differences in their tax costs of paying dividends. Although the 1997 rate of persistence is high, it is lower than the rate of persistence in dividend payments from publicly held firms to their common

shareholders. Of the Compustat listed firms with foreign affiliates that paid dividends to common shareholders in 1996, 98 percent paid dividends again in 1997, while of all Compustat firms that paid dividends in 1996, 93 percent did so again in 1997.

The regression analysis reported in section four exploits the panel nature of the data. As the bottom of Table 1 illustrates, the panel consists of 109,971 affiliate-year observations for the 23,799 majority-owned affiliates that comprise the sample.[14] As the descriptive statistics indicate, there is considerable heterogeneity in the duration of affiliates in the sample.

Figure 3 compares recent trends in dividend remittances by the sample of foreign affiliates with dividend payments by the sample of publicly listed companies analyzed by Fama and French (2000a).[15] The declining propensity to pay dividends documented by Fama and French is paralleled by the behavior of foreign affiliates over the 1982-1994 period. In recent years only 30 percent of foreign affiliates remitted dividends to their parent companies each year, a figure comparable to the fraction of publicly listed firms paying dividends to common shareholders. This aggregate pattern suggests that the puzzles of dividend policy, including the recent decline in the appetite to pay dividends, appear to be mirrored inside the firm.

Table II offers a more detailed breakdown of aggregate dividend trends. The top panel of Table II reports data for all affiliates reporting dividends in consecutive years. The bottom panel of Table II reports data for the publicly held parents of foreign affiliates that appear in the Compustat database in consecutive years. Several patterns are evident from these data, the first

[14] 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 0.5 percent of net income and lowest 0.5 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 112 of the 131,358 affiliate-year observations.

being that most affiliates and most parent companies pay zero dividends each year. Affiliates are equally likely to increase or decrease their dividends; roughly 10 percent of the whole sample of affiliates increases dividends from a positive payment in the previous period and 10 percent decrease dividends and continue to pay. By contrast, parent companies are much more likely to increase dividends than to decrease them; more than 20 percent of the parent sample increases its dividend payments from a positive payment each year, and about 5 percent reduces dividends and continues to pay. This difference is consistent with the signaling interpretations of dividends paid to common shareholders, in which the capital market takes any reduction in dividends to be a bad signal.[16] An equivalent signaling story inside the firm would be inconsistent with the symmetric dividend change pattern evidenced by affiliates. Affiliates are also much more likely than parent firms to omit dividends, or to resume paying them, which again suggests that their dividend policies are considerably less influenced by pressures attributable to capital market signaling. Even among firms paying dividends to common shareholders, the asymmetry of observed dividend changes does not necessarily imply that signaling considerations dictate dividend policy – though it is evidence of at least some signaling effects in the neighborhood of zero dividend changes.

4. Estimation results

The first step in identifying the dividend policies of affiliates is to estimate the parameters of Lintner functions corresponding to their behavior. The essential features of the Lintner model are that tax and nontax variables determine target payout ratios as well as the rates at which

[15] In order to control for changes in BEA sampling criteria in years between 1982 and 1997, the foreign affiliate data depicted in Figure 3 for all years are drawn from a sample with a common size cutoff (of $15 million in sales, assets, or net income).

actual dividends adjust to desired dividends. It is then possible to use the Lintner framework to measure the extent to which factors that are liable to affect dividend policy – informational problems between firms and diffuse shareholders in public capital markets, tax motivations, and control problems – are in fact associated with dividend policy inside firms.

4.1. Payout policies of affiliates and parents

Table III displays the results of estimating equation (3) for all majority-owned affiliates, taking all affiliates to have identical dividend payout equations. By construction, the 87,337 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.[17] The estimated 0.27 coefficient on lagged dividends in the regression reported in column 1 implies that affiliates pay dividends with adjustment parameters equal to (1 – 0.27), or 0.73. The affiliate's desired steady-state payout ratio is given by the ratio of the estimated coefficient on net income (0.41) and the estimated adjustment parameter – in the case of the estimates reported in column one, the implied desired steady-state payout ratio is (0.41/0.73), or 57 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

[16] Dividend reductions are associated almost exclusively with reported annual losses, as noted by DeAngelo, DeAngelo, and Skinner (1992). Since a significant fraction of firms with losses do not reduce dividends, it is reasonable for capital markets to be concerned about those that do.

[17] The basic Lintner specification in column (1) of Table III 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).

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.

How do these results compare to ones obtained from standard specifications of dividend equations for payouts to common shareholders? Table IV reports results that permit such a comparison. The regressions reported in Table IV are run on a pooled sample of affiliates and their parents, so the dependent variable (dividend payouts) combines two different types of dividends, payments from affiliates to parents, and payments from parents to common shareholders. The sample for these regressions is limited to observations of affiliates whose parent company information is reported by Compustat, and observations of those parents.

Column 1 of Table IV reports the results of a pooled regression in which all affiliate-parent and parent-shareholder dividend policies are assumed to be identical, and for which the estimates imply that the desired steady-state dividend payout ratio is 0.47 and adjustment parameter is 0.26. Column 2 reports results of the same regression including interactions of income and lagged dividends with parent dummy variables. The estimated 0.52 coefficient on the interaction of the parent dummy variable and lagged dividends indicates that the payout adjustment parameter is significantly smaller for parent companies (0.21) than it is for affiliates (0.72). Differences in the magnitudes of informational asymmetries might explain why the adjustment parameter for dividend policy inside the firm is higher than the adjustment parameter for dividend policy between firms and diffuse common shareholders. If corporate parents learn

little about the performance of foreign managers from dividend remittances, then they should be willing to select dividends that are close to target payouts. Managers of affiliates do not face the criticism of outside shareholders who might be concerned about what a dividend cut could mean.

It is evident from the estimated –0.32 coefficient on net income interacted with the parent dummy variable, reported in column 2 of Table IV, that the coefficient on net income is significantly lower for parents than it is for affiliates. It is interesting to note, however, that the implied desired steady-state payout ratios of parents and affiliates do not differ significantly: the desired steady-state payout ratio for affiliates is 0.58, and that for parents is 0.49; a Wald test fails to reject the equality of these ratios.

Columns 3 and 4 of Table IV introduce parent fixed effects but otherwise repeat the regressions reported in columns 1 and 2. The estimated coefficients are very similar to those reported in columns 1 and 2, and a Wald test again fails to reject the equality of the implied desired steady-state payout ratios of affiliates and parents. Columns 5 and 6 repeat the specification without fixed effects but using a Tobit estimator; the estimated coefficients are similar to those reported in columns 1–4.[18] These results suggest that dividend policies of foreign affiliates resemble the dividend policies of their parents, although adjustment is considerably faster inside the firm.

One of the differences between the sample of foreign affiliates and the sample of parent companies is that parent companies tend to be much larger than foreign affiliates. As a result, any dividend policy differences might be attributable to size effects. Incorporating a size

[18] The Tobit model allows for heteroskedasticity by estimating a variance model as a function of employment. The analysis uses bootstrap methods to estimate standard errors. The number of bootstrap repetitions was selected using a procedure recommended by Andrews and Buchinsky (2000). Their procedure yields a number of repetitions such

adjustment to the Lintner equations serves the function of addressing heteroskedasticity issues that might otherwise be present and in reducing the impact of very large affiliates and parents on the estimated coefficients. Table V reports regressions using the same specification as those reported in Table IV, with the difference that the dependent and all independent variables are normalized by the size of the (gross) assets of the entity paying dividends. The sample is limited to affiliates and parents with at least $5 million in assets. The asset concept used as a normalization is twice-lagged assets, chosen so that lagged dividend payouts do not mechanically influence the value of assets used to normalize the equations. As a result of this variable choice, it is necessary to have three continuous years of data in order to construct each observation used in the regression. This, together with the $5 million size cutoff, reduces the sample size from 84,016 in the regressions reported in Table IV to 68,858 in the regressions reported in Table V.

The asset-normalized regressions reported in Table V imply that affiliate-parent differences in estimated Lintner coefficients are smaller than those appearing in Table IV, suggesting that at least some of the apparent differences between affiliates and parents may be due simply to size differences. In the regression reported in column 2 of Table V, the implied adjustment parameter for affiliates is 0.67, while that for parents is 0.54; this difference is not statistically significant. The implied desired steady-state payout ratio for affiliates is 0.40, while that for parents is 0.21, and a Wald test indicates that this difference is statistically significant. Very similar results appear in the regressions reported in columns 3 and 4, in which parent fixed effects are introduced; the implied adjustment parameters are not significantly different, though Wald tests confirm that desired steady-state payout ratios are significantly different. The Tobit

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that the percentage deviation from using an infinite number of bootstraps is less than 10 percent with probability

results reported in columns 5 and 6 exhibit somewhat larger differences between the behavior of affiliates and parents.

The regressions reported in Tables III, IV and V impose the restriction that all affiliates use the same payout equations, and that all parents do so also. A parent's payout equation might differ from those of other parents but be similar to the payout equations of that parent's foreign affiliates. Table VI reports the results of estimating separate payout equations for each parent-and-its-affiliates system, including a complete set of interactions with dummy variables for parent status, and testing for differences between the policies of parents and affiliates. The sample is restricted to affiliates and parents for which there are data available for all 16 years of the sample. This restriction reduces the sample size of parent- and affiliate-years to 19,151 observations.

The first column of Table VI indicates that, of 194 parent systems for which separate dividend payout equations were estimated, in only 57 of them were Wald tests capable of rejecting (at the 5 percent level) the equality of parent and affiliate desired steady-state dividend payout ratios. This finding is similar to that implied by the coefficient estimates reported in column 2 of Table IV, the difference being that the estimates summarized in Table VI permit payout equations to differ for each parent system. Of the 194 parent systems for which it is possible to estimate separate parent and affiliate adjustment parameters, these parameters differ significantly between affiliates and parents in 134 instances. This, too, is consistent with the results reported in Table IV. The third column of Table VI reports that, for 145 of 194 parent systems, Wald tests reject the joint hypothesis that both payout ratios and adjustment parameters are identical for parents and affiliates.

0.95.

Dividend policy is a component of a firm's overall financial policy that more broadly 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 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 III and elsewhere might reflect the impact of changing investment patterns and not necessarily patterns of desired dividend repatriations. In such a case, it would be a mistake to attribute managerial control, signaling, or any other dividend-specific motive to the pattern of estimated coefficients.

Table VII presents a number of specifications designed to explore this possibility. The first two columns of Table VII present estimated coefficients for equations that are identical to those presented in columns 1 and 2 of Table III, 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 III. 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 remittances represent any 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 VII report the results of regressions in which the sample of foreign affiliates is distinguished by the extent of local indebtedness. Affiliates with greater than median local debt/asset ratios are classified as

having “high” local debt and the balance are classified as having “low” local debt.[19] Affiliates with high local debt/asset ratios arguably have the greatest ability to use capital markets to finance their activities, and therefore might exhibit the least impact of capital expenditures on dividends.

The results reported in columns 3 and 4 of Table VII 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. Despite these minor differences, dividend remittances from affiliates with and without extensive borrowing are functions of net income and lagged dividends much as in the regressions reported in Table III. Inclusion of capital expenditure, 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 VII indicates that affiliate capital expenditures has no effect on dividend remittances from affiliates that borrow heavily, and a (small) positive effect on dividends from affiliates that do little borrowing. A model in which dividends are determined by the need to fund capital expenditures would instead imply that affiliates with low local debt/asset ratios exhibit negative effects of capital spending on dividends. Consequently, this evidence suggests that it is appropriate to interpret observed dividend policies as reflecting desired dividends.

4.2. Diffuse Ownership and Public Capital Markets

One straightforward explanation for the presence of Lintner-like results inside the firm is that the demands of diffuse shareholders in public capital markets are translated into demands for dividend remittances inside the firm. A comparison of the dividend policies of affiliates whose

[19] For the purposes of this classification, firms are grouped by ISI industry categories, as defined in Appendix II, for

parents face different degrees of exposure to capital market pressures offers a test of this hypothesis.

Table VIII 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 VIII is dividend remittances from affiliates to their parents. The first column of Table VIII 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.[20] The implied desired steady-state payout ratios (0.44) and adjustment parameters (0.78) of affiliates of these private firms are similar to the desired payout ratios (0.57) and adjustment parameters (0.72) 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 slightly higher adjustment parameter for private firms presumably reflects a smaller role for dividend signaling. 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 4-5 of Table VIII, and in the Tobit specifications reported in columns 7-8.

Columns 3, 6, and 9 of Table VIII 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.

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a particular year.

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 affiliate dividends 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 0.25, differing significantly from one. Parental financial pressures as measured by dividends to common shareholders explain only a 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. In this context, it is noteworthy that the 0.25 coefficient on "parent dividends" is consistent with the results reported by Hines (1996), in which $1 of foreign profits triggers the same dividend payout to common shareholders as does $3 to $4 of domestic profits. The OLS results, reported in columns 3 and 6 of Table VIII, 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.

The results in Table VIII 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. If privately held parents differ in unobserved ways from publicly held parents, such a comparison may conflate the effect of unobserved characteristics with the effects of diffuse

[20] 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.

ownership. Firms that convert ownership status during the sample period – either through leveraged buyouts (LBOs) or initial public offerings (IPOs) – provide opportunities to investigate the effect of ownership changes on dividend policies. The advantage of looking at dividend policy changes of firms that change ownership status is that doing so implicitly holds constant a number of unobserved firm characteristics – though not all, since ownership changes are not random events. Nonetheless, ownership changes provide settings for useful tests of the impact of diffuse ownership in public capital markets. The results of these tests are presented in Table IX. Unfortunately, this investigation of the impact of diffuse ownership greatly reduces the sample size. The combined pool of affiliates from both LBO and IPO transactions between 1982 and 1997 allows for 4,172 affiliate-year observations with slightly more than half stemming from IPOs.[21]

Column 1 of Table IX presents coefficient estimates from the OLS specification of the dividend equation with a set of interactions for affiliate years in which parent firms were publicly held. As in Table VIII, the dependent variable is dividend remittances from affiliates to their parents. Estimated coefficients on "net income of affiliates" and "lagged dividend payments" in column 1 correspond to Lintner parameters during years in which parent companies are privately held; these coefficients imply an adjustment parameter of 0.67 and a desired steady-state payout ratio of 0.36. The insignificant coefficients on the dummy interactions for public ownership indicate that affiliate dividend policies during the years in which parent companies were publicly held – either prior to an LBO or following an IPO – do not differ significantly from those during

[21] The sample of firms that experience an LBO is drawn from the Security Data Corporation. These data were manually checked against lists of LBOs appearing in other research, including Andrade and Kaplan (1999) and Gilson, Hotchkiss, and Ruback (2000). For firms that go public after completing an LBO, reverse LBO dates are collected. The sample of firms that experience an IPO are drawn from Jay Ritter's IPO database and the Security Data Corporation. Observations appearing in both databases that do not have matching IPO years are dropped. All

the years in which parent companies are privately owned. The results of including parent fixed effects (reported in column 4) similarly indicate little discernable effect of public ownership.

Given the substantial differences between leveraged buyouts and initial public offerings, it is useful to consider separately the impact of these transactions in order to isolate effects that might be unique to one of them. Column 2 of Table IX presents results of estimating the OLS dividend equation for affiliates whose parents undergo LBOs; column 3 presents results of estimating the dividend equation for affiliates whose parents perform IPOs. In both cases the dividend policies of affiliates during periods in which their parent companies are publicly held are indistinguishable from those during periods in which their parents are privately owned. Similar results appear with the inclusion of parent fixed effects (reported in columns 5 and 6). The Tobit specifications (reported in columns 8 and 9) generate coefficients on the interaction of public dummies and net income that are negative and, in the case of affiliates undergoing an LBO, significant.[22]

4.3. Tax Motivations

As with dividend policy between parents and shareholders, tax considerations are likely to influence the formulation of dividend policy inside the firm. Indeed, the patterns of dividend policy inside the firm noted above may simply reflect tax considerations and little else. As developed in section 2 above, the tax incentives facing an affiliate differ by organizational form, by direct and indirect ownership, and by local tax rates. The regressions reported in Table X

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observations of affiliates of parents undergoing an LBO or IPO for the year of the change and the subsequent year are dropped from the analysis.

[22] The Tobit estimates reported in columns 7 - 9 of Table IX imply that foreign affiliates of LBO and IPO firms reduce dividends (slightly) at higher incomes during years in which their parent companies are publicly held. This puzzling implication is inconsistent with Tobit results for the larger sample reported in column 6 of Tables IV and

include interactions of net income and lagged dividends with dummy variables for branches and indirectly owned incorporated affiliates in order to examine the extent to which behavior differs between affiliates with different organizational forms and, consequently, different tax motivations.

For both branch affiliates and indirectly-owned affiliates, there is good reason to believe that the taxation of dividends should not motivate dividend policy. Specifically, dividend remittances by branches do not trigger home country taxes, since the United States taxes foreign branch income whether or not it is repatriated as dividends. Indirectly owned affiliates are affiliates that are owned by some combination of other affiliates that are in turn owned by the parent. This indirect chain of ownership carries important tax implications, since a dividend payment from one foreign affiliate to another 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.

The results reported in column 1 of Table X suggest that organizational form differences have only very minor implications for the nature of dividend payout processes.[23] The estimated

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V, and may simply reflect the small sample sizes together with the weighting implicit in the heteroskedasticity-consistent Tobit procedure.

[23] 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 distributions 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

coefficient on the interaction of the branch dummy variable and affiliate net income is positive but small and insignificant; the same is true of the estimated coefficient on the interaction of the branch dummy and lagged dividends. The estimated coefficients on variables that interact dummy variables for indirect ownership are likewise relatively small and insignificant.[24] 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. These results suggest that tax motivations cannot fully explain the presence of distinctive dividend policy parameters inside the firm.

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 X 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 and net income for each affiliate observation, then using medians of these rates as country-level observations for

repatriation patterns of branches and subsidiaries would encounter difficulties due to spurious correlation with local tax rates.

[24] 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.

each country and year.[25] 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 X confirm that tax costs affect the long-run payout ratios of incorporated affiliates. The estimated 0.31 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. 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 –0.14 coefficient on the interaction of country tax rates, net income, and the branch dummy variable implies that tax rates do not influence payout ratios of foreign branches in a significant way. The sum of this coefficient and the coefficient on the country tax rate interacted with net income is only 0.16, and it does not differ from zero by a statistically significant amount. This is consistent with the tax incentives facing foreign branches, and the way in which they differ from the incentives facing separately incorporated affiliates. The estimated –0.24 coefficient on the interaction of country tax rates, net income, and the indirect ownership dummy is likewise large enough in magnitude to eliminate the effect of tax rates on dividend repatriations. This result is also sensible, given the tax incentives facing indirectly

[25] 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.

owned affiliates. The inclusion of parent fixed effects in column 4 and a Tobit specification in column 6 provide similar results.[26]

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 cannot fully explain patterns of dividend policies inside firms.

4.4. Control Problems inside the Firm

One of the strong implications of the U.S. tax treatment of foreign income is that American multinational corporations should never 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 reported in Table XI examine the determinants of tax-penalized behavior, in order to identify the extent to which such policies may be motivated by incomplete organizational control. Much as the existence of costly dividend behavior between shareholders and firms has been linked to control problems, this section investigates if control problems motivate dividend policy inside the firm by examining behavior that is explicitly tax-penalized.

[26] Desai, Foley and Hines (2001) note that tax incentives may vary between affiliates located in the same country.

Table XI reports regressions run on the sample of affiliate-years for which parent companies increased their paid-in 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 consistently large, positive, and significant 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. Doing so generates foreign tax credits that can profitably be used to reduce tax burdens on other income.

Columns 2 and 3 of Table XI add variables intended to reflect the difficulty that American parents face in monitoring and controlling managers of their affiliates. The "partial ownership dummy" equals one if the American parent owns less than 100 percent of an affiliate,[27] while the "log of distance to affiliate" variable is the log of distance in miles from Washington, D.C. to the capital city of the country in which the affiliate is located. The results reported in columns 2 and 3 indicate that partially-owned affiliates, and those located furthest from the United States, are the most likely to engage in the potentially tax-disadvantaged behavior. The estimated coefficients on partial ownership and country tax rates imply that the effect of partial ownership is roughly equal in magnitude to the impact of a 100 percent tax rate difference.

Incorporation of 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.

[27] All affiliates in the sample are majority-owned, so partial ownership is defined as greater than 51 percent but less than 100 percent ownership.

Column 4 of Table XI adds as an explanatory variable a dummy variable equal to one if the affiliate employs a U.S. citizen in the most recent survey benchmark year. The predicted sign on this variable is ambiguous. While the presence of U.S. citizens might be expected to reduce control problems, their employment may also reflect that locations in which firms expect to encounter the most control problems are those to which firms choose to deploy their American workforce. The estimated effect of having a U.S. citizen is positive, meaning that affiliates with a U.S. citizen are more likely to engage in potentially tax-disadvantaged behavior. This coefficient suggests, only very tentatively, that the employment of expensive expatriates and costly monitoring through forced dividend payments both occur where control problems are significant.

The degree to which countries enforce property rights and have traditions of law and order may also influence the willingness to incur avoidable tax penalties in order to control managers. In countries characterized by limited respect for private property rights or weak rule of law, ex post punishment mechanisms available to parents are restricted and lack credibility. Since parent firms with affiliates in these countries have limited financial and legal recourse against foreign managers who mislead them and misappropriate resources, they may insist on regular dividend payments to verify profitability. In order to test this possibility, columns 5-6 of Table XI add explanatory variables associated with the efficacy of legal institutions, "property rights" and "rule of law," as well as a measure of development, "log of GNP per capita."[28]

[28] Property rights and legal traditions tend to be stronger in high-income countries, so per capita GNP is included as an explanatory variable in order to distinguish the impact of legal regimes from effects that are correlated with local affluence. The property rights index is a measure of the security of property rights in 1996 (on a scale from 1 to 5) derived from Johnson and Sheehy (1996), in which higher numbers correspond to greater protection for private property. The score is based, broadly, on the degree of legal protection for private property, the extent to which the government protects and enforces laws that protect private property, the probability that the government will expropriate private property, and the country's legal protection to private property. The rule of law measure is an assessment of the law and order tradition and is taken from LaPorta, Lopez-de-Silanez, Shleifer, and Vishny (1998).

Larger values of the property rights and rule of law indices reflect greater abilities credibly to threaten action against managers, so the negative estimated coefficients on the property rights index and on the rule of law index both are consistent with the use of dividends to control foreign managers.

Columns 1-3 of Table XII repeat the specifications of Table XI, doing so on a subsample of affiliates located in countries with tax rates below 32 percent in order to isolate those cases in which such behavior is strongly inconsistent with tax arbitrage. Partial ownership continues to have a very strong and positive effect on such behavior in this subsample, though estimated coefficients on country tax rates become negative and insignificant, as do estimated coefficients on distances to affiliates. One of the difficulties of interpreting the country tax rate effects (and possibly the distance effects) in this subsample stems from the loss of variation among the observations chosen on the basis of tax rates. In the regressions using the subsample of high tax rate countries (those whose tax rates exceed 38 percent), reported in columns 4-6, country tax rate effects are again insignificant though now positive, partial ownership has a large and significant effect, and distances to affiliates and presence of U.S. citizens have significant and positive effects. In the low-tax subsample, the estimated impact of property rights is negative and significant, while the rule of law has a negative and significant estimated effect in the high tax subsample.

5. Conclusion

The dividend puzzle persists in the presence of extremely concentrated ownership. The majority-owned foreign affiliates of American companies have dividend policies that resemble

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The measure is scaled between 0 and 10, lower scores corresponding to a less pronounced tradition of law and order.

the practices of domestic companies in paying dividends to diffuse common shareholders. The similarity of dividend policies inside firms and the dividend policies of firms making payments to external shareholders is apparent from a comparison of their aggregate practices as well as their desired payout ratios and adjustment parameters. Dividend policies inside firms entail gradual adjustment of payouts in the direction of targets that depend on current earnings and the tax costs of repatriating dividends. A comparison of the behavior of affiliates whose parent companies have distinct ownership types or dividend-paying practices suggests that capital market concerns do not motivate the payment of dividends inside the firm. While inside-firm dividend policy is responsive to tax factors, the similarity of dividend policy across entities facing distinctive tax treatment indicates that tax motivations alone cannot explain the observed patterns of behavior. Analysis of explicitly tax-penalized behavior suggests that control concerns contribute to the formulation of dividend policy inside the firm.

This study analyzes dividend remittances from foreign affiliates, but in principle, the findings are likely to characterize other financial flows inside firms, such as dividend payments from domestic subsidiaries to their domestic parent companies. The fact that dividend remittances are structured to alleviate control problems inside firms offers evidence concerning the magnitude and importance of incentive problems inside the firm and the manner in which they influence financial policies.

Instead of solving the dividend puzzle, this investigation may appear to broaden it by identifying patterns of behavior inside the firm that resemble those of firms making payments to outsiders. However, this study holds the prospect of clarifying some aspects of dividend

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The log of GNP per capita is defined as the log of the mean value of GNP per capita in constant 1995 U.S. dollars over the 1982 to 1997 period, as reported in the World Development Indicators collected by the World Bank.

behavior, since policies inside the firm do not stem from informational asymmetries between corporate managers and diffuse public owners. That such similar policies exist with and without diffuse public shareholders suggests that at least some of the puzzling features of the dividend practices of publicly-held firms in paying common dividends may have little to do with capital market concerns and much to do with aspects of corporate control.

Appendix I on the Taxation of U.S. Multinationals[29]

Almost all countries tax income generated by economic activity that takes place within their borders. In addition, many countries—including the United States—tax the foreign incomes of their residents. In order to prevent double taxation of the foreign income of Americans, U.S. law permits taxpayers to claim foreign tax credits for income taxes (and related taxes) paid to foreign governments.[30] These foreign tax credits are used to offset U.S. tax liabilities that would otherwise be due on foreign-source income. The U.S. corporate tax rate is currently 35 percent, so an American corporation that earns $100 in a foreign country with a 10 percent tax rate pays taxes of $10 to the foreign government and $25 to the U.S. government, since its U.S. corporate tax liability of $35 (35 percent of $100) is reduced to $25 by the foreign tax credit of $10.

Americans are permitted to defer U.S. tax liabilities on certain unrepatriated foreign profits until they receive such profits in the form of dividends. This deferral is available only on the active business profits of American-owned foreign affiliates that are separately incorporated as subsidiaries in foreign countries. The profits of unincorporated foreign businesses, such as those of American-owned branches in other countries, are taxed immediately by the United States. Interest, rent, and royalty income received from foreign countries also represents foreign-source income on which U.S. tax obligations cannot be deferred.

U.S. tax law contains provisions designed to prevent American firms from delaying the repatriation of lightly-taxed foreign earnings. These tax provisions apply to controlled foreign corporations, which are foreign corporations owned at least 50 percent by American individuals or corporations who hold stakes of at least 10 percent each. Under the Subpart F provisions of U.S. law, the passive income of controlled foreign corporations is "deemed distributed," and therefore immediately taxable by the United States, even if not repatriated as dividend payments to American parent firms.[31]

Because the foreign tax credit is intended to alleviate international double taxation, and not to reduce U.S. tax liabilities on profits earned *within* the United States, the foreign tax credit is limited to U.S. tax liability on foreign-source income. For example, an American firm with $200 of foreign income that faces an U.S. tax rate of 35 percent has a foreign tax credit limit of $70 (35 percent of $200). If the firm pays foreign income taxes of less than $70, then the firm would be entitled to claim foreign tax credits for all of its foreign taxes paid. If, however, the

[29] Portions of this description are excerpted from Hines (1991, 1999).

[30] Under U.S. law, taxpayers may claim foreign tax credits for taxes paid by foreign firms of which they own at least 10 percent, and only those taxes that qualify as income taxes are creditable.

[31] Subpart F income consists of income from passive investments (such as interest and dividends received from investments in securities), foreign base company income (that arises from using a foreign affiliate as a conduit for certain types of international transactions), income that is invested in United States property, money used offshore to insure risks in the United States, and money used to pay bribes to foreign government officials. American firms with foreign subsidiaries that earn profits through most types of active business operations, and that subsequently reinvest those profits in active lines of business, are not subject to the Subpart F rules, and are therefore able to defer U.S. tax liability on their foreign profits until they choose to remit dividends at a later date.

firm pays $90 of foreign taxes, then it would be permitted to claim no more than $70 of foreign tax credits.

Taxpayers whose foreign tax payments exceed the foreign tax credit limit are said to have "excess foreign tax credits;" the excess foreign tax credits represent the portion of their foreign tax payments that exceed the U.S. tax liabilities generated by their foreign incomes. Taxpayers whose foreign tax payments are smaller than their foreign tax credit limits are said to be in "excess limit" or to have "deficit foreign tax credits." American law permits taxpayers to use excess foreign tax credits in one year to reduce their U.S. tax obligations on foreign source income in either of the two previous years or in any of the following five years.[32]

In practice, the calculation of the foreign tax credit limit entails certain additional complications, notable among which is that total worldwide foreign income is used to calculate the foreign tax credit limit. This method of calculating the foreign tax credit limit is known as "worldwide averaging." A taxpayer has excess foreign tax credits if the sum of worldwide foreign income tax payments exceeds this limit. The combination of worldwide averaging and selective repatriation of dividends from subsidiaries located in countries with differing tax rates implies that the average foreign tax rate used to calculate the foreign tax credit limit need not equal the average foreign tax rate faced by a firm's foreign affiliates. The ability of multinational firms to adjust the amount of foreign income received in non-dividend forms (such as interest and royalties) contributes to their control over whether or not they have excess foreign tax credits.

[32] Foreign tax credits are not adjusted for inflation, so are generally the most valuable if claimed as soon as possible. Barring unusual circumstances, firms apply their foreign tax credits against future years only when unable to apply them against either of the previous two years.

Appendix II on BEA Survey of U.S. Multinationals

The Bureau of Economic Analysis (BEA) Annual Survey of U.S. Direct Investment Abroad from 1982 through 1997 provides data on the financial and operating characteristics of U.S. firms operating abroad. These surveys ask reporters to file detailed financial and operating items for each affiliate and information on the value of transactions between U.S. parents and their foreign affiliates. The International Investment and Trade in Services Survey Act governs the collection of the data and the Act ensures that "use of an individual company's data for tax, investigative, or regulatory purposes is prohibited." Willful noncompliance with the Act can result in penalties of up to $10,000 or a prison term of one year. As a result of these assurances and penalties, BEA believes that coverage is close to complete and levels of accuracy are high.

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 (MNE) 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. In order to be considered as a legitimate foreign affiliate, the foreign business enterprise should be paying foreign income taxes, have a substantial physical presence abroad, have separate financial records, and should take title to the goods it sells and receive revenue from the sale. In order to determine ownership stakes in the presence of indirect ownership, BEA determines the percentage of parent ownership at each link and then multiplies these percentages to compute the parent's total effective ownership.

BEA collects sufficient information to allow one to link affiliate level data through time to create a panel. By checking the status of all affiliates that filed forms in the previous year and are expected to fall within reporting requirements, BEA identifies which enterprises leave the sample. By monitoring news services for information on mergers, acquisitions, and other activities of U.S. companies, BEA identifies which new enterprises should be included in the sample. To check the integrity of reported data, BEA accountants confirm that information satisfies certain integrity checks. For example, BEA checks whether the owners' equity at time *t* is roughly equal to the owners' equity at time *t-1* plus any retained earnings, plus additional paid-in-capital, plus unrealized gains and losses, and plus any translation adjustments that account for changes in the value of foreign currencies that are not picked up in net income calculations.

The foreign affiliate survey forms that US MNEs are required to complete vary depending on the year, the size of the affiliate, and the U.S. parent's percentage of ownership of the affiliate. The most extensive data are available for 1982, 1989, and 1994, when BEA conducted Benchmark Surveys. In these years, all affiliates with sales, assets, or net income in excess of $3 million in absolute value and their parents were required to file reports. In non-benchmark years between 1982 and 1997, exemption levels were higher. From 1983-1988, all affiliates with an absolute value of sales, assets, or net income less than $10 million were exempt, and this cutoff increased to $15 million from 1990-1993 and $20 million from 1995-

1997. While the BEA does estimate data in order to arrive at universe totals, the following analysis excludes estimated data.[33,34]

To classify the industrial activities of parents and affiliates, BEA assigns each domestic and foreign entity to an international surveys industry (ISI) classification code that is based on the Standard Industrial Classification (SIC) scheme. A typical ISI code roughly covers the same scope of activities as a three-digit SIC code. The classification of foreign affiliate data tends to be precise because parents can consolidate foreign-affiliate operations for BEA reporting only if they are in the same country and the same three-digit ISI industry or if they are integral parts of the same business operation. Since the internal financial policy of firms primarily engaged in financial services is likely to differ substantially from that of other firms, all affiliates of multinationals that have a parent in financial services and all affiliates in such industries are excluded.[35]

The analysis presented in the paper uses responses to the following U.S Direct Investment Abroad annual survey form questions:

Form of organization of foreign affiliate – Mark one of the following: corporation, branch, partnership, other – *specify*

Ownership Interest in This Foreign Affiliate by U.S. Reporter – Enter the U.S. Reporter's direct and indirect interest based on voting stock if an incorporated foreign affiliate, or an equivalent interest if an unincorporated foreign affiliate. – *Enter to the nearest tenth of one percent.*

Dividends or net income remitted to owners – Incorporated affiliate, enter amount of dividends declared out of current- and prior-period income on common and preferred stock,

[33] BEA uses reported data to estimate universe totals when surveys cover only larger affiliates or when only certain affiliates provide information on particular survey forms. Estimated data is unlikely to have a significant impact on the BEA's published data at the industry or country level as data based on actual reports exceeds 90% of the estimated totals of assets and sales in each of the years between 1982 and 1997. To avoid working with estimated data, only affiliates required to provide all the information associated with a particular analysis are considered.

[34] The sample of foreign affiliates reporting dividends varies from year to year. In the non-benchmark years before 1994, all surveyed majority-owned incorporated affiliates and branches report dividends. In the non-benchmark years after 1994, BEA introduced a long and short form for majority owned affiliates, and only those surveyed affiliates that filed the long form, or those with an absolute value of sales, assets, or net income in excess of $50 million, reported divided information. The details of reporting requirements are more complicated in benchmark years. In 1982, all surveyed affiliates report total dividend payments. In 1989, all surveyed affiliates report dividends paid directly to the U.S. parent. This figure is converted to total dividends simply by dividing it by the fraction of an affiliate owned by its parent – under the realistic assumption that dividends are distributed pro rata to all owners. In 1994, all surveyed affiliates with an absolute value of sales, assets, or net income greater than $50 million report total dividends and all other surveyed affiliates report dividends paid directly to the U.S. parent. For these smaller affiliates, total dividends are again calculated by dividing parent dividends by the parent's ownership fraction. Some affiliates are owned indirectly by their parent companies through chains of foreign subsidiaries; since parents receive dividends only indirectly from such foreign affiliates, it is impossible to calculate total dividends from distributions to parents. The sample excludes observations of such affiliates in 1989, and those small affiliates for which total dividend information is not available in 1994.

[35] Specifically, all affiliates primarily operating in, or with parents that are classified as primarily operating in, ISI codes 600 through 679 are excluded. This includes affiliates classified as holding companies.

excluding stock and liquidating dividends. Unincorporated affiliate, enter amount of current- and prior-period net income remitted to owners.

Sales or gross operating revenues, excluding sales taxes – Gross sales minus returns, allowances, and discounts, or gross operating revenues, both exclusive of sales or consumption taxes levied directly on the consumer, net value-added taxes, and excise taxes levied on manufacturers wholesalers, and retailers.

Foreign income taxes – Provision for foreign income taxes for the fiscal year. *Do **not** include U.S. income taxes. Exclude production royalty payments.*

Net Income is calculated as the difference between total income and total costs and expenses. Total income includes sales or gross operating revenues, excluding sales taxes, income from equity investments, certain realized and unrealized gains, and other income. Total costs and expenses include costs of goods sold or services rendered and selling, general, and administrative expenses, foreign income taxes, and other costs and expenses.

Assets include the sum of inventories, other current assets, property, plant and equipment, gross less accumulated depreciation and depletion and other noncurrent assets.

Paid-in-Capital owned by Parent – for incorporated affiliates equals that part of owner's equity that is capital stock and additional paid-in capital.

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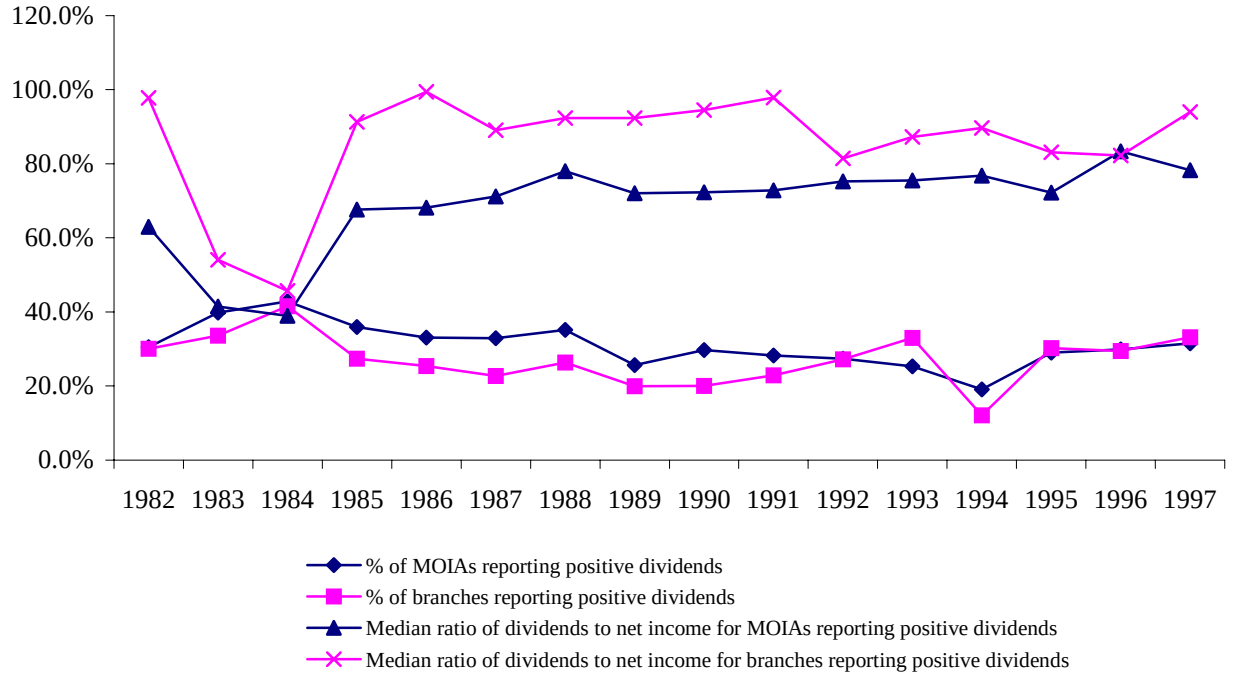
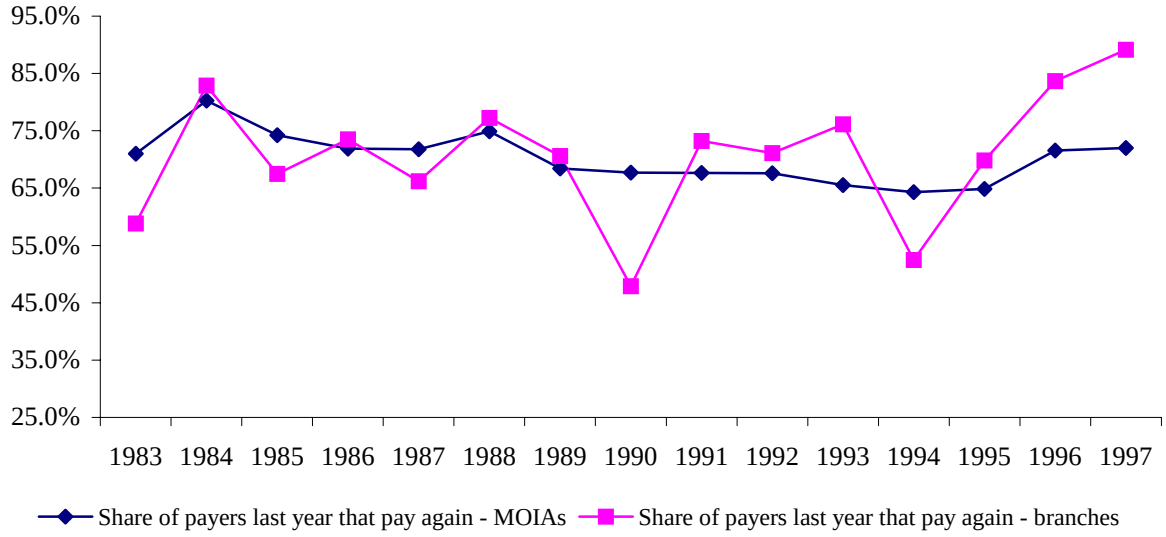
Figure 1: Propensity to pay dividends for majority-owned incorporated affiliates (MOIAs) and branches, 1982-1997



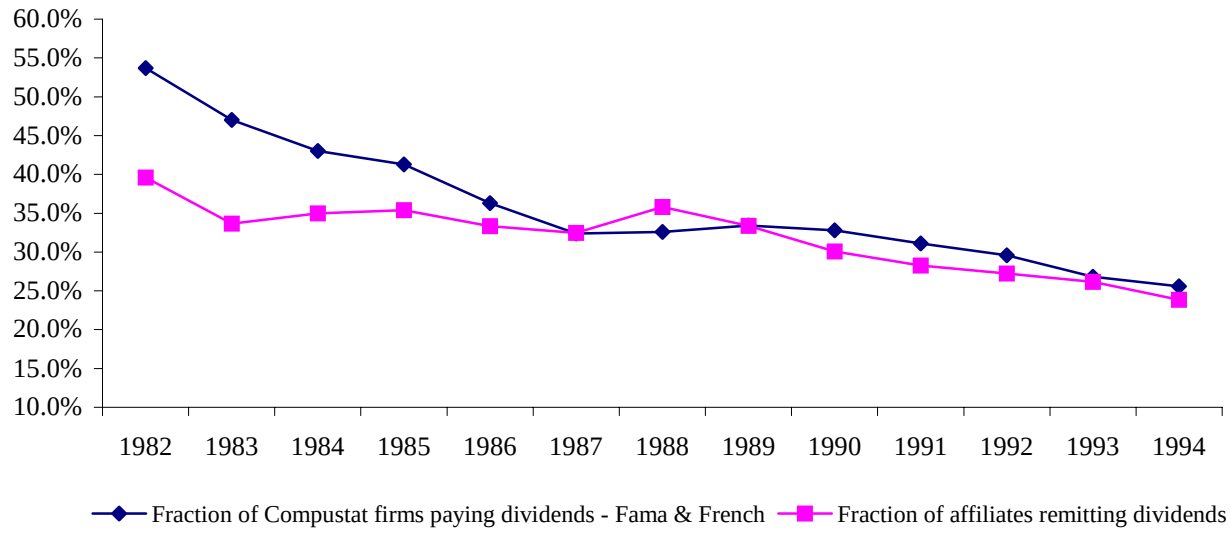
Note: Diamonds and squares indicate fractions of entities remitting dividends for MOIAs and branches, respectively. Triangles and X's depict median ratios of dividends to net income for MOIAs and branches, respectively.

Figure 2: Persistence of dividend payments, by organizational form, 1983-1997



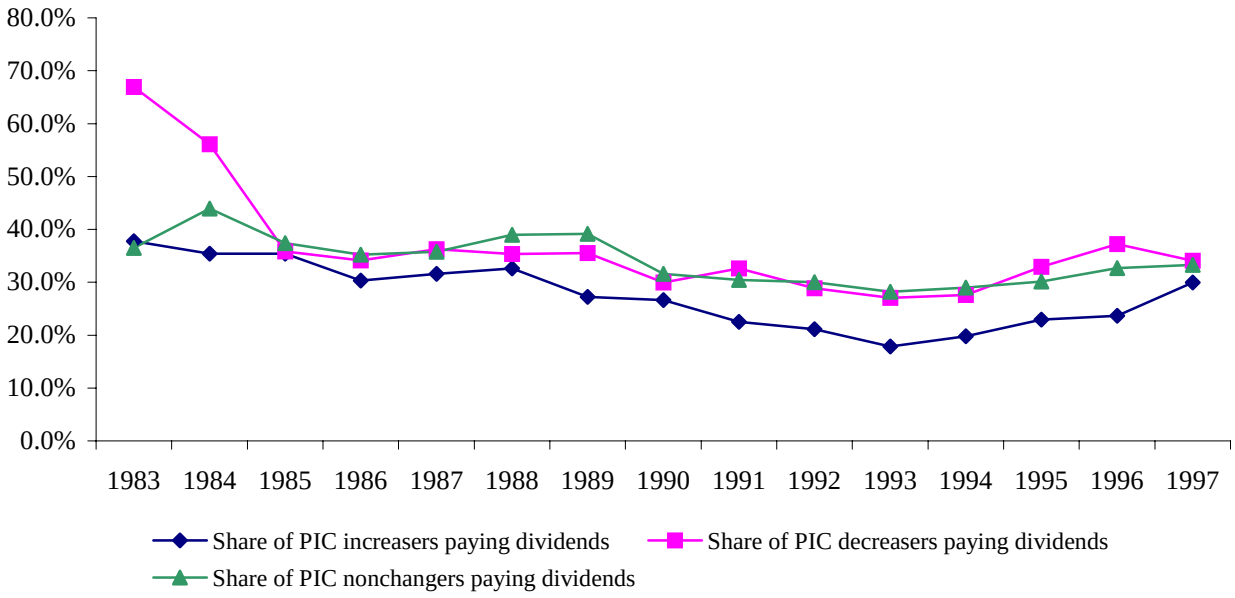
Note: Diamonds and squares depict the ratio of entities remitting dividends in years t and t-l to the number of entities remitting dividends in year t-1 and reporting dividends in year t for MOIAs and branches, respectively.

Figure 3: Propensity to pay dividends, publicly held firms and foreign affiliates, 1982-1994



Note: Diamonds correspond to fractions of Compustat firms paying dividends to shareholders as reported in Fama and French (2000a). Squares correspond to fractions of affiliates remitting dividends to American parents.

Figure 4: Propensity to Pay Dividends, by Changes in Paid-In-Capital, 1983-1997



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 I

Descriptive Statistics for Affiliates and Parents, 1997 and the 1982-1997 Panel

1997	*Multinational Affiliates*	*Multinational Parents*	*Compustat Firms*
Number of Entities	10,838	535	9,150
Mean Assets	$ 157,450	$ 6,080,755	$ 2,037,720
Mean Net Income	$ 9,785	$ 359,972	$ 48,385
Mean Dividends	$ 5,325	$ 134,883	$ 19,331
% Majority owned incorporated subsidiaries	86%	-	-
% Minority owned incorporated subsidiaries	9%	-	-
% Branches	4%	-	-
% Other Organizational Forms	1%	-	-
Number of Parents	1,347	-	-
% with > 50 affiliates	2%	-	-
% with >10 & < 50 affiliates	19%	-	-
% with > 1 & < 10 affiliates	48%	-	-
% with 1 affiliate	31%	-	-
% reporting positive dividends	32%	70%	27%
Median ratio of dividends to net income for payers	78%	28%	28%
% of parents with more than five affiliates receiving dividends	77%	-	-
Median ratio of dividends to net income for receivers	47%	-	-
% of inc. affiliates in wholesale trade	23.9%	-	-
% of inc. affiliates in chemical manufacturing	13.9%	-	-
% of inc. affiliates in transportation equipment manufacturing	12.6%	-	-
% of inc. affiliates in services	9.5%	-	-
% of affiliates with some Indirect Ownership	24.4%	-	-
% of affiliates with all Indirect Ownership	18.6%	-	-
% of affiliates that are repeat payers from previous year	72%	98%	93%
% of affiliates reporting an increase in Paid-in-Capital	12.1%	-	-
Share reporting positive dividends	30.0%	-	-
% of affiliates reporting an decrease in Paid-in-Capital	9.3%	-	-
Share reporting positive dividends	34.1%	-	-
% of affiliates reporting no substantive change in Paid-in-Capital	78.6%	-	-
Share reporting positive dividends	33.3%	-	-
1982-1997 Panel	*Majority-Owned Affiliates*		
Total Majority-Owned Affiliates		23,799	
Total Affiliate-Years		109,971	
Frequency of Dividend Reporting:	1x	8x	16x
Number of Entities	8,353	710	1,165
Median Sales	$ 6,092	$ 30,397	$ 105,705

Note: The top panel provides descriptive statistics from 1997 for affiliates, their Compustat-listed parents, and a broader sample of Compustat firms. The bottom panel provides descriptive statistics for the panel of mulitnational affiliates and highlights the unbalanced nature of the panel by providing statistics for those affiliates that appear one time, eight times, and throughout the sample period. All dollar figures are in thousands.

Table II

Comparative Annual Dividend Changes for Affiliates and Parents, 1983-1997

	Type of Affiliate Dividend Changes as % of Sample					
Year	Increase	Decrease	Resume	Omit	Maintain	Maintain at 0
1983	10.0%	14.1%	13.9%	11.1%	1.3%	49.6%
1984	12.0	12.1	9.9	8.6	1.0	56.5
1985	13.5	11.2	9.3	8.5	1.1	56.4
1986	14.3	9.1	8.0	9.9	1.2	57.5
1987	13.4	8.8	10.0	9.6	0.9	57.1
1988	13.6	9.4	12.5	8.1	1.0	55.5
1989	12.5	11.2	11.3	11.3	1.0	52.8
1990	11.3	9.5	9.0	10.8	0.9	58.6
1991	9.6	9.5	8.8	9.6	1.1	61.4
1992	9.7	8.7	9.0	9.3	1.0	62.3
1993	8.5	9.0	8.5	9.5	0.9	63.6
1994	8.6	7.4	10.0	9.8	0.8	63.4
1995	11.1	8.3	9.2	10.9	1.0	59.6
1996	11.1	9.3	9.5	8.6	1.1	60.4
1997	9.0	10.7	10.5	7.9	0.8	61.0

	Type of Parent Dividend Changes as % of Sample					
Year	Increase	Decrease	Resume	Omit	Maintain	Maintain at 0
1983	29.4%	6.8%	1.8%	3.3%	8.3%	50.5%
1984	29.3	5.2	2.0	2.7	7.3	53.5
1985	26.5	6.0	1.8	2.6	7.5	55.7
1986	22.7	6.3	2.0	2.6	6.9	59.5
1987	21.7	5.8	2.5	3.2	5.6	61.2
1988	22.2	5.8	2.7	2.4	5.7	61.3
1989	22.8	5.7	2.5	2.4	5.9	60.7
1990	20.5	7.0	1.8	3.0	6.4	61.3
1991	17.6	7.1	1.6	3.0	7.7	62.9
1992	18.3	6.2	2.2	2.3	6.9	64.0
1993	19.5	4.7	2.3	2.6	5.9	65.0
1994	22.6	4.0	2.8	2.4	6.0	62.3
1995	22.7	4.1	3.1	1.9	5.6	62.7
1996	22.0	4.1	2.4	2.4	5.1	64.0
1997	21.3	4.1	1.9	2.9	4.7	65.1

Note: The top panel provides annual dividend change data for majority-owned foreign affiliates from 1983 to 1997. The bottom panel provides annual dividend change data for the public parents of majority-owned foreign affiliates from 1983 to 1997. An "Increase" refers to a change in the level of dividends that exceeds 2% of the current and previous period dividend. A "Decrease" is defined analogously.

Table III

Lintner Dividend Specifications for Affiliate Payments to Parents

Dependent Variable: Dividend Payments by Affiliates to Parents				
	(1)	(2)	(3)	(4)
Net Income	0.4132	0.4122	0.3567	0.3377
	(0.0197)	(0.0209)	(0.0233)	(0.0235)
Lagged Dividend Payments	0.2747	0.2588	0.0822	0.1366
	(0.0276)	(0.0277)	(0.0240)	(0.0391)
Fixed Effects?	No	Yes-parent	Yes-affiliate	No
OLS or Tobit?	OLS	OLS	OLS	Tobit
R- Squared	0.3954	0.3836	0.5157	
Log-Likelihood				-91,925
No. Obs	87,337	87,337	87,337	87,337
Payout Ratio	0.57	0.56	0.39	0.39
Adjustment Parameter	0.73	0.74	0.92	0.86

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 heteroskedasticity-consistent bootstrapped standard errors presented in parentheses.

Table IV
Pooled Lintner Regressions with Affiliate-Parent and Parent-Shareholder Payments

Dependent Variable: Dividend Payments by Affiliates to Parents or Parents to Shareholders						
	(1)	(2)	(3)	(4)	(5)	(6)
Net Income	0.1213	0.4193	0.1232	0.4119	0.2757	0.3429
	(0.0283)	(0.0208)	(0.0288)	(0.0217)	(0.0281)	(0.0219)
Lagged Dividend Payments	0.7399	0.2764	0.7250	0.2609	0.3277	0.2857
	(0.0834)	(0.0282)	(0.0876)	(0.0280)	(0.0435)	(0.0326)
Parent Dummy Interacted with Net Income		-0.3192		-0.3097		-0.1870
		(0.0382)		(0.0405)		(0.0625)
Parent Dummy Interacted with Lagged Dividends		0.5181		0.5209		0.2005
		(0.1008)		(0.1040)		(0.2191)
Parent Fixed Effects?	No	No	Yes	Yes	No	No
OLS or Tobit?	OLS	OLS	OLS	OLS	Tobit	Tobit
R-Squared	0.8080	0.8211	0.8059	0.8192		
Log-Likelihood					-45,011	-44,802
No. Obs	84,016	84,016	84,016	84,016	84,016	84,016
Payout Ratio for Affiliates		0.58				
Payout Ratio for Parents		0.49				
Adjustment Parameter for Affiliates		0.72				
Adjustment Parameter for Parents		0.21				

Note: The dependent variable in all specifications is the dollar value of dividend payments by majority-owned affiliates to parents or by parents to shareholders. "Net Income" is the after-foreign tax net income of an affiliate or the after-tax net income of the parent in the same year. "Lagged Dividend Payments" is the dollar value of dividend payments by the affiliate or the parent in the previous year. "Parent Dummy" takes on a value of one if the entity is a parent firm. The interaction terms interact "Parent Dummy" with "Net Income" and "Lagged Dividend Payments," respectively. 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 modeling heteroskedasticity with employment and bootstrapped standard errors in parentheses.

Table V

Pooled Size-Adjusted Lintner Regressions with Affiliate-Parent and Parent-Shareholder Payments

Dependent Variable: Dividend Payments Scaled by Twice-Lagged Assets						
	(1)	(2)	(3)	(4)	(5)	(6)
Net Income/Twice-Lagged Assets	0.2625	0.2711	0.2290	0.2340	0.1693	0.1783
	(0.0073)	(0.0076)	(0.0071)	(0.0073)	(0.0092)	(0.0096)
Lagged Dividend Payments/Twice-Lagged Assets	0.3354	0.3306	0.2721	0.2695	0.3126	0.3059
	(0.0199)	(0.0201)	(0.0195)	(0.0196)	(0.0212)	(0.0214)
Parent Dummy Interacted with (Net Income/Twice-Lagged Assets)		-0.1580		-0.1552		-0.1657
		(0.0167)		(0.0136)		(0.0270)
Parent Dummy Interacted with (Lagged Dividend Payments/Twice-Lagged Assets)		0.1261		-0.0558		0.2365
		(0.0943)		(0.0673)		(0.1240)
Parent Fixed Effects?	No	No	Yes	Yes	No	No
OLS or Tobit?	OLS	OLS	OLS	OLS	Tobit	Tobit
R-Squared	0.3360	0.3382	0.2731	0.2755		
Log-Likelihood					-21,236	-21,201
No. Obs	68,858	68,858	68,858	68,858	68,858	68,858

Note: The dependent variable in all specifications is the dollar value of dividend payments by majority-owned affiliates to parents or by parents to shareholders. "Net Income/Twice-Lagged Assets" is the ratio of the after-foreign tax net income of the affiliate or after-tax net income of the parent normalized by twice-lagged assets. "Lagged Dividend Payments/Twice-Lagged Assets" is the dollar value of dividend payments by the affiliate or parent normalized by twice-lagged assets. "Parent Dummy/Twice-Lagged Assets" takes on a value of one divided by twice-lagged assets if the entity is a parent. The interaction terms interact a parent dummy variable with "Net Income/Twice-Lagged Assets" and "Lagged Dividend Payments/Twice-Lagged Assets," respectively. Columns 1 and 2 present OLS specifications without fixed effects. Columns 3 and 4 present OLS specifications with parent fixed effects. Columns 5 and 6 present Tobit specifications. Heteroskedasticity-consistent standard errors are presented in parentheses.

Table VI

Firm-by-Firm Wald Test for Equality of Dividend Policy with a Balanced Panel

Number of Parents	237
Number of Affiliates	1,336
Number of Observations	19,644

	Payout Ratio	Adjustment Parameter	Both Parameters
Number of Observations	194	194	194
Number of Observations in which Parent and Affiliate Parameters Differ (10% level)	51	157	161
Number of Observations in which Parent and Affiliate Parameters Differ (5% level)	39	147	152

Note: This table summarizes the results of firm-by-firm Wald tests for the equality of dividend policy parameters for parent-shareholder dividend payments and affiliate-parent dividend payments within controlled groups. The sample is limited to those parents and affiliates that are present throughout the sample period.

Table VII

Dividend Payments, Capital Expenditures, and Local Debt

Dependent Variable: Dividend Payments by Affiliates to Parents						
	(1)	(2)	(3)	(4)	(5)	(6)
Net Income	0.4012	0.4022	0.3587	0.3600	0.3440	0.3466
	(0.0204)	(0.0214)	(0.0230)	(0.0238)	(0.0240)	(0.0248)
Lagged Dividend Payments	0.2708	0.2557	0.2488	0.2316	0.2412	0.2248
	(0.0276)	(0.0277)	(0.0395)	(0.0391)	(0.0389)	(0.0386)
Capital Expenditures	0.0254	0.0236			0.0386	0.0369
	(0.0100)	(0.0106)			(0.0161)	(0.0168)
High Local Debt Dummy Interacted with Net Income			0.1326	0.1264	0.1459	0.1405
			(0.0412)	(0.0417)	(0.0431)	(0.0436)
High Local Debt Dummy Interacted with Lagged Dividend Payments			0.0339	0.0382	0.0414	0.0455
			(0.0547)	(0.0542)	(0.0546)	(0.0541)
High Local Debt Dummy Interacted with Capital Expenditures					-0.0365	-0.0368
					(0.0202)	(0.0206)
Parent Fixed Effects?	No	Yes	No	Yes	No	Yes
R-Squared	0.3952	0.3832	0.4023	0.3897	0.4024	0.3897
No. Obs	86,845	86,845	83,215	83,215	82,723	82,723

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 VIII

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

Dependent Variable: Dividend Payments by Affiliates to Parents									
	Affiliates of non-Compustat Firms	*Affiliates of Compustat Firms*	*Affiliates of Compustat Firms*	*Affiliates of non-Compustat Firms*	*Affiliates of Compustat Firms*	*Affiliates of Compustat Firms*	*Affiliates of non-Compustat Firms*	*Affiliates of Compustat Firms*	*Affiliates of Compustat Firms*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Net Income of Affiliates	0.3464	0.4123	0.3679	0.3340	0.4091	0.3699	0.2224	0.3488	0.4027
	(0.0351)	(0.0214)	(0.0224)	(0.0383)	(0.0224)	(0.0233)	(0.0366)	(0.0257)	(0.0308)
Lagged Dividend Payments	0.2179	0.2822	0.2614	0.1968	0.2683	0.2504	0.1961	0.2752	0.2912
	(0.0531)	(0.0291)	(0.0283)	(0.0586)	(0.0290)	(0.0282)	(0.0809)	(0.0337)	(0.0418)
Parent Dividends to Shareholders Interacted with Relative Assets			0.2512			0.2439			-0.3082
			(0.0492)			(0.0541)			(0.0692)
Parent Fixed Effects?	No	No	No	Yes	Yes	Yes	No	No	No
OLS or Tobit?	OLS	OLS	OLS	OLS	OLS	OLS	Tobit	Tobit	Tobit
R-Squared	0.2726	0.4112	0.4194	0.2759	0.3971	0.4043			
Log-Likelihood							-21,389	-84,893	-64,069
No. Obs.	21,096	66,236	65,976	21,096	66,236	65,976	21,096	66,236	65,976

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 modeling heteroskedasticy with employment and bootstrapped standard errors in parentheses.

Table IX

The Impact of Ownership on Affiliate Dividend Policy: The Case of Converters

Dependent Variable: Dividend Payments by Affiliates to Parents

	Affiliates of All Converting Firms	*Affiliates of LBO firms*	*Affiliates of IPO firms*	*Affiliates of All Converting Firms*	*Affiliates of LBO firms*	*Affiliates of IPO firms*	*Affiliates of All Converting Firms*	*Affiliates of LBO firms*	*Affiliates of IPO firms*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Net Income of Affiliates	0.2379	0.3731	0.1812	0.2041	0.3357	0.1520	0.2396	0.3775	0.1476
	(0.0642)	(0.1129)	(0.0682)	(0.0575)	(0.1120)	(0.0602)	(0.0829)	(0.1475)	(0.0872)
Lagged Dividend Payments	0.3318	0.2204	0.3720	0.2739	0.1779	0.3126	0.2226	0.1563	0.2326
	(0.1161)	(0.0999)	(0.2019)	(0.1091)	(0.1000)	(0.1903)	(0.0874)	(0.1318)	(0.1271)
Interaction of Public Dummy and Net Income	-0.0096	-0.1881	0.0479	-0.0058	-0.1743	0.0461	-0.2552	-0.4756	-0.1536
	(0.1024)	(0.1202)	(0.1184)	(0.0952)	(0.1192)	(0.1081)	(0.1080)	(0.1773)	(0.1148)
Interaction of Public Dummy and Lagged Dividend	-0.1761	0.2144	-0.2436	-0.2146	0.1880	-0.2844	0.1464	0.3377	0.1432
	(0.1617)	(0.1838)	(0.2283)	(0.1892)	(0.1806)	(0.2481)	(0.1554)	(0.2104)	(0.1809)
Parent Fixed Effects?	No	No	No	Yes	Yes	Yes	No	No	No
OLS or Tobit?	OLS	OLS	OLS	OLS	OLS	OLS	Tobit	Tobit	Tobit
R-Squared	0.2070	0.3940	0.1512	0.2177	0.3808	0.1730			
Log-Likelihood							-4,038	-1,626	-2,093
No. Obs.	4,172	1,775	2,397	4,172	1,775	2,397	4,172	1,775	2,397

Note: The sample is limited to affiliates of parent firms that are publicly-held at the start of the sample, but are subsequently taken private by a leveraged buyout (LBO), and affiliates of parent firms that are privately-held at the start of the sample, but subsequently go public via an Initial Public Offering (IPO). The dependent variable in all specifications is the dollar value of dividend payments by majority-owned affiliates for affiliates of all LBO and IPO firms (columns 1, 4, and 7), for all LBO firms (columns 2, 5, and 8) and for all IPO firms (columns 3, 6, and 9). "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. The interaction terms interact a dummy variable that takes a value of one in years in which parent firms are publicly-held (and equals zero otherwise) with net income and lagged dividends. 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 modeling heteroskedasticy with employment and bootstrapped standard errors in parentheses.

Table X

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	0.4257	0.3351	0.4244	0.3391	0.3577	0.3505
	(0.0246)	(0.0477)	(0.0260)	(0.0496)	(0.0330)	(0.0613)
Lagged Dividend Payments	0.2788	0.2731	0.2627	0.2577	0.2394	0.2393
	(0.0329)	(0.0324)	(0.0328)	(0.0323)	(0.0416)	(0.0386)
Interaction of Branch	0.0221	0.0689	0.0054	0.0522	0.0823	0.0850
Dummy and Net Income	(0.0705)	(0.0990)	(0.0710)	(0.1025)	(0.1061)	(0.1042)
Interaction of Indirect Ownership	-0.0545	0.0207	-0.0519	0.0346	0.0007	0.0456
Dummy and Net Income	(0.0466)	(0.0851)	(0.0475)	(0.0889)	(0.0718)	(0.1158)
Interaction of Branch Dummy	0.0137	0.0166	0.0139	0.0166	-0.0456	0.0477
and Lagged Dividend Payments	(0.1030)	(0.1028)	(0.1021)	(0.1018)	(0.0643)	(0.1105)
Interaction of Indirect Ownership	-0.0382	-0.0325	-0.0331	-0.0278	0.0818	0.0788
Dummy and Lagged Dividend Payments	(0.0680)	(0.0677)	(0.0670)	(0.0668)	(0.0679)	(0.0717)
Interaction of Country-Tax Rate		0.3054		0.2873		0.0175
and Net Income		(0.1395)		(0.1453)		(0.1672)
Interaction of Country-Tax Rate,		-0.1440		-0.1437		-0.1748
Net Income, and Branch Dummy		(0.2928)		(0.3177)		(0.3359)
Interaction of Country-Tax Rate,		-0.2409		-0.2924		-0.4086
Net Income, and Indirect Ownership Dummy		(0.2702)		(0.2816)		(0.3577)
Parent Fixed Effects?	No	No	Yes	Yes	No	No
OLS or Tobit?	OLS	OLS	OLS	OLS	Tobit	Tobit
R-Squared	0.3968	0.3983	0.3840	0.3852		
Log-Likelihood					-60,401	-60,330
No. Obs	84,237	84,139	84,237	84,139	84,237	84,139

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 median tax rate 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 modeling heteroskedasticity with employment and bootstrapped standard errors in parentheses.

Table XI

Determinants of Tax-Penalized Behavior, Probit

Dependent Variable: Dummy For Payment of Dividend by Affiliates						
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.7840	-0.8422	-1.2701	-1.2711	-0.3330	-0.9963
	(0.0406)	(0.0410)	(0.1385)	(0.1567)	(0.2857)	(0.2510)
Country Tax Rate	0.5148	0.4831	0.5111	0.4043	0.6268	0.7025
	(0.1123)	(0.1123)	(0.1179)	(0.1348)	(0.1451)	(0.1542)
Partial Ownership Dummy		0.4844	0.4829	0.5236	0.4994	0.4967
		(0.0354)	(0.0358)	(0.0415)	(0.0427)	(0.0441)
Log of Distance to Affiliate			0.0514	0.0616	0.0615	0.0550
			(0.0156)	(0.0175)	(0.0176)	(0.0192)
U.S. Citizen Employed				0.1323	0.1144	0.1255
				(0.0303)	(0.0310)	(0.0316)
Property Rights					-0.0776	
					(0.0278)	
Rule of Law						-0.0302
						(0.0173)
Log of GNP Per Capita					-0.0941	-0.0083
					(0.0233)	(0.0350)
No. Obs.	11,550	11,550	11,439	8,498	8,353	8,082
Log-Likelihood	-6,745.67	-6,653.46	-6,587.23	-5,121.54	-5,005.98	-4,832.91

Note: The sample in this table consists of all those affiliate-years where a parent increases the paid-in-capital of the affiliate. The dependent variable in all specifications is a dummy that takes the value one if the affiliate pays a dividend in that year, and is zero otherwise. "Country Tax Rate" is the median tax rate in the country in which an affiliate is located. "Partial ownership dummy" takes the value of one if the affiliate is not wholly-owned. "Log of Distance to Affiliate" is the natural log of distance in miles to the capital city of the country of the affiliate from Washington D.C. "Share of U.S. employees" is the fraction of all employees of an affiliate that are U.S. citizens. "Property Rights" is an index of the level of protection private property receives. "Rule of Law" is an index that asseses the law and order tradition in a country. Heteroskedasticity-consistent standard errors are presented in parentheses.

Table XII

Tax-Penalized Behavior Distinguished by Local Tax Rates, Probit

Dependent Variable: Dummy For Payment of Dividend by Affiliates						
	Low-Tax Countries			*High-Tax Countries*		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.0855	0.9730	-1.4601	-1.2695	-0.4711	-0.9864
	(0.5391)	(0.9171)	(0.7964)	(0.2220)	(0.3943)	(0.3108)
Country Tax Rate	-0.2435	-0.1573	-0.0367	0.4281	0.8643	0.4260
	(0.2718)	(0.2918)	(0.3376)	(0.4746)	(0.5002)	(0.5417)
Partial Ownership Dummy	0.4352	0.2918	0.4439	0.5085	0.4790	0.4902
	(0.0761)	(0.0802)	(0.0864)	(0.0586)	(0.0601)	(0.0610)
Log of Distance to Affiliate	-0.0617	-0.1234	0.1015	0.0641	0.0597	0.0059
	(0.0634)	(0.0760)	(0.0779)	(0.0217)	(0.0225)	(0.0247)
U.S. Citizen Employed	0.1448	0.1339	0.1514	0.1500	0.1363	0.1337
	(0.0559)	(0.0582)	(0.0611)	(0.0442)	(0.0449)	(0.0453)
Property Rights		-0.1245			-0.0662	
		(0.0570)			(0.0434)	
Rule of Law			0.0184			-0.1088
			(0.0322)			(0.0275)
Log of GNP Per Capita		-0.0403	-0.0223		-0.0880	0.1168
		(0.0473)	(0.0682)		(0.0356)	(0.0533)
No. Obs.	2,431	2,311	2,109	3,982	3,961	3,915
Log-Likelihood	-1,454.89	-1,369.49	-1,241.46	-2,464.74	-2,442.67	-2,409.06

Note: The sample in Columns 1 through 3 and 4 through 6 restrict attention to subsamples of affiliates in countries with tax rates lower than 32% or higher than 38%, respectively. The dependent variable in all specifications is a dummy that takes the value one if the affiliate pays a dividend in that year, and is zero otherwise. "Country Tax Rate" is the median tax rate in the country in which an affiliate is located. "Partial ownership dummy" takes the value one if the affiliate is not wholly-owned and zero otherwise. "Log of Distance to Affiliate" is the natural log of distance in miles to the capital city of the country of the affiliate from Washington D.C. "Share of U.S. employees" is the fraction of all employees of an affiliate that are U.S. citizens. "Property Rights" is an index of the level of protection private property receives. "Rule of Law" is an index that asseses the law and order tradition in a country. Heteroskedasticity-consistent standard errors are presented in parentheses.