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5 Coming Home To America: Dividend Repatriations By U.S. Multinationals

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American corporations earn a large and growing volume of after-tax profits through their affiliated foreign companies. The foreign earnings of U.S. corporations are typically subject to taxation both by host foreign governments and by the U.S. government, an arrangement that dramatically complicates the companies' tax returns and the consequences of their international financial transactions. Under these circumstances, obvious questions arise about the extent to which the system of international taxation affects the behavior of multinational corporations.

This paper analyzes the financial flows from foreign subsidiaries of American multinational corporations to their parent corporations in the United States. These flows represent one method by which foreign earnings of American companies are returned ("repatriated") to American investors. Their size generally reflects the size of American investments overseas: in 1984, the last year for which data are available, the controlled foreign corporations of American multinationals earned after-foreign-tax profits of $30 billion, of which they repatriated $11.8 billion in dividends to their American parent companies.[1] These repatriations are of importance not only to U.S. investors, who thereby have access to those funds, but also to the U.S. government, which generally does not tax foreign earnings of

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controlled foreign corporations until they are repatriated. It is precisely the effect on repatriation behavior of this deferred taxation that we examine.

The paper is organized as follows. In section 5.1, we review the current tax system as applied to multinational firms and consider the incentives it creates for various intrafirm financial transactions (and, in particular, forms of repatriations). We summarize in section 5.2 repatriation patterns from aggregate time-series data on the overseas operations of U.S. multinationals. Our principal findings appear in section 5.3, in which we explore directly the determinants of distributions by foreign subsidiaries to their U.S. parent corporations, using new micro data on 12,041 controlled foreign corporations (and their 453 U.S. parents) collected from tax returns for 1984. This source exposes variations in distribution patterns not detectable in aggregate data. In particular, we find that most subsidiaries paid no dividends at all to their parents and that the U.S. tax system collected very little revenue on their foreign income while distorting their internal financial transactions. Conclusions and some implications for U.S. corporate tax reform are presented in section 5.4.

5.1 The Tax System and Its Incentives

5.1.1 The System

The United States claims tax authority over all persons resident in America, meaning that American individuals and corporations must pay tax to the U.S. government on all their income, whether earned in the United States or abroad. "Residence" is not the only possible criterion for tax authority, and a number of European countries tax their residents on a "territorial" basis, on which only that income earned within the country's borders is subject to tax.[2] The American "residence" system is arguably a more common practice and is used by other important capital-exporting countries such as the United Kingdom and Japan. Hence, an understanding of the international effects of residence taxation by the United States may shed light on the effects of international taxation throughout the world.

In addition to their U.S. tax liabilities, American multinational corporations usually owe taxes to foreign governments on profits earned locally within their borders. In order not to subject Americans earning income abroad to double taxation, U.S. tax law provides a foreign tax credit for income taxes (and related taxes) paid to foreign governments. Thus, in the simplest possible situation, a U.S. corporation earning $100 in a foreign country with a 10 percent tax rate (and a foreign tax obligation of $10) pays only $24 to the U.S. government since its U.S. corporate tax obligation of $34 (34 percent of $100) is reduced to $24 by the foreign tax credit of $10. The foreign tax credit is, however, limited to U.S. tax liability on foreign income; if, in the example, the foreign tax rate were 50 percent, then the

firm pays $50 to the foreign government, but its U.S. foreign tax credit is limited to $34. Hence, a U.S. firm receives full tax credits for its foreign taxes paid only when it is in a "deficit credit" position, that is, when its average foreign tax rate is less than its tax rate on domestic operations. A firm has "excess credits" if its available foreign tax credits exceed U.S. tax liability on its foreign income. Since 1976, the law requires American companies to calculate their foreign tax credits on a worldwide basis, so that all foreign income and foreign taxes paid are added together in the computation of the foreign tax credit limit. Furthermore, income is broken into different functional "baskets" in the calculation of applicable credits and limits.[3]

Deferral of U.S. taxation of certain foreign earnings is another important feature of the U.S. international tax system. This deferral takes two forms. The first is very common in income tax systems: unrealized capital gains are usually untaxed.[4] The second is that earnings of foreign subsidiaries of U.S. corporations are not subject to U.S. taxation until repatriated to their American parent corporations. This type of deferral is available only to foreign operations that are separately incorporated in foreign countries ("subsidiaries" of the parent) and not to consolidated ("branch") operations.[5] Multinationals generally can choose the legal form of their foreign operations, and this choice can affect their tax obligations. Parent U.S. firms are generally taxed on their subsidiaries' foreign income only when repatriated and receive "indirect" foreign tax credits ("deemed-paid credits") for foreign income taxes paid (by the subsidiaries) on income subsequently received as dividends. The U.S. government taxes branch profits as they are earned, just as it would profits earned within the United States. On the other hand, organizing as a branch offers to the investor the possibility of deducting from U.S. income foreign branch losses and may involve (in some cases) more lenient foreign regulations.

The deferral of U.S. taxation creates an incentive for firms to delay paying dividends from their subsidiaries to their American parents. In 1962, Congress enacted the Subpart F provisions in part to prevent indefinite deferral of U.S. tax liability on income earned abroad that is continually reinvested merely in order to escape U.S. taxes. Subpart F rules apply to controlled foreign corporations (CFCs), which are foreign corporations owned at least 50 percent by U.S. persons holding stakes of at least 10 percent each. The Subpart F rules include provisions that treat passive income, and income invested in U.S. property, as if that income were distributed to the U.S. parent company, so it is subject to immediate U.S. taxation. Controlled foreign corporations that reinvest their earnings in active foreign businesses avoid the Subpart F restrictions and can continue to defer U.S. tax liability on those earnings. The Tax Reform Act of 1986 further expands the coverage of Subpart F and also makes currently taxable in the United States the income of American investors in passive foreign investment

companies that do not qualify as CFCs because they do not meet the 50 percent ownership rule.

"Dividends" to the parent are not the only form of repatriation. "Interest" paid to the parent to service debt capital contributions usually has the additional tax feature of deductibility in the host country. Astute use of transfer pricing can allow the subsidiary to shift earnings to the parent or to other subsidiaries of the parent having more advantageous tax treatment; royalty payments to the parent can serve a similar function. Foreign governments often impose moderate taxes on interest, rent, and royalty payments from foreign affiliates to their American parents; these withholding taxes are fully creditable against foreign tax liabilities of the U.S. taxpayer. We return to a comparison of various repatriation channels later.

5.1.2 Taxes and the Repatriation Decision

At the core of our concern is the effect of the tax rules just described on firms' repatriation decisions. Consider first the tax cost of dividends (D) paid from a foreign subsidiary to its American parent. Assume that the foreign country uses a classical corporate income tax system and imposes no withholding taxes on dividends. Then the dividend payment does not change the foreign tax liability of the firm, but it does produce a U.S. tax liability of $(D + \text{FTC})\,\tau - \text{FTC}$, where τ is the U.S. tax rate and FTC the foreign tax credit generated by the dividend payment. For parent corporations that do not have excess foreign tax credits and their subsidiaries that pay dividends out of current earnings, the foreign tax credit is $\tau^* E^* D/[(1 - \tau^*)E^*]$, where τ^* is the foreign tax rate and E^* is the subsidiary's foreign earnings. Hence, the dividend payment obliges the U.S. parent to pay net U.S. taxes of

$$D(\tau - \tau^*)/(1 - \tau^*), \tag{1}$$

and the parent keeps a net dividend of

$$D(1 - \tau)/(1 - \tau^*). \tag{2}$$

Significant withholding taxes imposed by foreign governments offer a complication, especially for firms in excess credit positions. For U.S. parents with deficit credits, the payment of a dividend increases their foreign tax liability by the withholding tax on the dividend, but their American tax liability is reduced by an equal amount through the foreign tax credit. For U.S. parents in excess credit positions, subsidiary dividend payments trigger withholding tax liabilities with no corresponding reduction in U.S. taxes; in that case, dividends raise total worldwide tax burdens.

Abstracting for the moment from considerations of transfer pricing, alternative repatriation strategies include payments to the parent of interest, rent, or royalties, all of which are generally deductible for tax purposes.[6]

Since foreign corporate tax rates are generally much higher than withholding tax rates,[7] the foreign tax saving offered by deducting repatriations in those forms well outweighs the cost of withholding tax liabilities. Hence, a tax-minimizing firm with excess foreign tax credits should seek to maximize those repatriations.

5.1.3 U.S. Tax Law and the "Dividend Puzzle"

Given the structure of U.S. taxation of multinationals, one might question whether domestic tax revenue is likely to be collected. For example, given the credit for foreign taxes paid, if foreign tax rates are high relative to U.S. tax rates, much if not all of the U.S. tax liability on this income would be eliminated. However, historically (prior to passage of the Tax Reform Act of 1986), foreign tax rates have been lower than the U.S. statutory corporate income tax rate.

Dividends are paid to U.S. parents. As we describe in more detail in section 5.2, the controlled foreign corporations of U.S. multinationals repatriate more than one-third and as much as 60 percent of their foreign earnings each year as dividends. The "dividend puzzle" is the following: why do they pay dividends, given that dividends are often the least favorable (from a tax standpoint) means of repatriating earnings? The same puzzle arises in the analysis of dividend payouts of domestic firms to their stockholders, and analyses of the domestic puzzle suggest three general approaches to this question.

The first view is based on the "trapped equity" or "tax capitalization" model of corporate dividends associated with King (1977), Auerbach (1979), and Bradford (1981)[8] and applied by Hartman (1985) to the analysis of foreign dividends received by multinationals. Suppose that a parent capitalizes a wholly owned subsidiary with an initial transfer of equity capital. When the subsidiary has growth opportunities and desired investment exceeds internally generated funds, the parent transfers additional funds to it. For a mature subsidiary, equity is trapped—earnings exceed profitable investment opportunities, and the subsidiary repatriates the residual funds. Costly repatriations can be delayed as long as the subsidiary has active investment opportunities abroad, but, once these are exhausted, the Subpart F rules prevent the use of passive investments to defer U.S. tax obligations. In the trapped equity view, dividend payouts are unaffected by (permanent) changes in their tax price; they respond only to characteristics of the subsidiary, in particular, the difference between its internally generated funds and its profitable investment opportunities. The characteristics of the parent firm and other subsidiaries are irrelevant.

A second view corresponds to the notion that a multinational chooses financial policy in its subsidiaries in order to minimize the firm's global tax liability. The most preferred tool is transfer pricing across affiliates to locate profits in low-tax "havens." In addition, one portion of income received

from subsidiaries is compensation for technology transferred via direct investment—for example, royalties and license fees. There is scope for tax minimization through strategies that trade off royalties for dividends. Kopits (1976) illustrates this point by showing that the tax-minimizing royalty is at least as large as the tax shelter provided by any excess credits from dividends (properly adjusted).

Tax-minimization schemes encounter two stumbling blocks. The first is external: governments are understandably unenthusiastic about such behavior by multinationals and generally limit firms' discretion over pricing and financial decisions. Sales of goods between multinationals and their affiliates are generally required to take place at market, or "arm's length," prices, though in practice this requirement may be difficult to enforce.[9] Similarly, many countries limit multinationals to using arm's length interest rates and have formula restrictions on rent and royalty payments. As a consequence, even tax-minimizing firms may be unable to use nondividend methods to repatriate foreign earnings.[10] The second difficulty that tax-minimization encounters is that, for reasons of corporate control, the parent may prefer to evaluate the subsidiary as an independent profit center; this point is developed below.

In addition to altering the form of payment across repatriation mechanisms at a given point in time, global tax-minimization strategies alter the time-series patterns of dividend repatriations as well. For example, increased dividend payments from subsidiaries during a period in which the parent is making losses at home reduces future tax liabilities. Global tax-minimization behavior is distinguished from "trapped equity" behavior in that subsidiaries' distribution patterns depend not only on their own tax prices but also on their tax prices relative to those for other subsidiaries of the same parent. In addition, parent characteristics are relevant to global tax minimization. To the extent that subsidiaries can, at the margin, alter the composition of their distributions among royalties, interest, and dividends, then whether their parents are in excess credit positions—or, alternatively, losing money domestically—will be important factors in dividend decisions.[11]

A third general view suggests that dividend repatriations are "valued" by the parent. That is, the parent desires a particular pattern of repatriations, and tax authorities have effectively forestalled clever use of royalty payments and transfer pricing at the margin. Alternatively, the parent values dividend distributions per se. In the literature on domestic dividend distributions, models with asymmetric information between firm "insiders" and "outsiders" (in the domestic case, "management" and "shareholders," respectively) figure prominently. Signaling models (see, e.g., Bhattacharya 1979) emphasize that dividend payments convey information about the profitability of the firm; such signals—valuable because of the private information—are sent even given the tax cost of paying dividends. It is hard to believe that

private information about capital investment projects is an important problem in majority-owned or wholly owned affiliates of U.S. multinationals.[12]

An alternative information problem stresses "agency cost" considerations.[13] For example, absent substantial equity interest in the venture by a subsidiary's managers—or, alternatively, compensation tied closely to subsidiary profits—subsidiary managers may be tempted to raise costs by investing funds intended for "soft capital" expenditures (such as organizational expenditures or maintenance) in perquisites or projects for personal gain. Such soft capital expenditures are much harder to observe and monitor than spending on "hard capital" (capital investment projects). Monitoring is additionally complicated by differences in local language and custom, the possible involvement of host country nationals (or the host country government) with conflicting objectives, and so on. The optimal contract in such a setting will have less variable payments across project outcomes than would prevail under symmetric information (see the formal model in Gertler and Hubbard 1988). To the extent that direct ownership stakes by subsidiary managers are limited, incentive-compatible financing arrangements will necessarily mitigate the use of tax-minimizing strategies that artificially lower the subsidiary's accounting profits.

Such concerns have been expressed in the management literature as well. The use of complicated schemes for tax avoidance by shuffling profits among subsidiaries has been observed to be mitigated by high administrative costs and the increased difficulty in monitoring managerial performance. The need for internal accounting systems to monitor managerial decision making has been emphasized by Brooke and Remmers (1970) and Greene and Duerr (1970) and in survey evidence for U.S. firms by Burns (1980) and for U.S. and Japanese firms by Tang (1979, chap. 6).

5.1.4 Previous Studies of Dividend Repatriation Patterns

Empirical evidence on the determinants of multinational dividend repatriations and of the importance of tax considerations has been mixed, in part because of problems of data availability. In an early study, Barlow and Wender (1955) hypothesized that a multinational would make an initial infusion of capital and reinvest the earnings in the hope of a large ultimate realization. Such a pattern was not consistent with early empirical evidence, however. Stevens (1969) documented the importance of continuing infusions of capital by parents to established subsidiaries; additional evidence of continuing external finance was provided by Stevens (1972) and Severn (1972). The issue of adjustment of dividend repatriations to changes in profitability was addressed by Mauer and Scaperlanda (1972), who worked within the framework of Lintner's (1956) partial adjustment model of dividend payments. They found much more rapid speeds of adjustment of

subsidiary dividend payments to earnings changes than had comparable studies for domestic (U.S.) firm payouts to shareholders; tax effects were not considered.

Perhaps the first systematic evidence incorporating tax effects is found in Kopits's (1972) study of 1962 data on U.S. subsidiary repatriations from a set of selected countries. Kopits finds that "mature subsidiaries" (those with low growth of desired capital stock) have higher payout ratios, ceteris paribus, than do subsidiaries with more rapidly growing desired capital stocks. However, he also finds important "tax price" effects, especially in countries with separate taxes on undistributed profits.[14]

Additional evidence against the view that dividends are only a residual has accumulated. Zenoff's (1966) survey of repatriation patterns within U.S. multinationals found that firms with "young" subsidiaries varied remittance patterns according to the subsidiaries' needs for funds while remittance patterns of "established" subsidiaries were set according to rules of thumb (see also Brooke and Remmers 1970, chap. 6). Using a sample of majority-owned affiliates of U.S. multinationals in 1977 and 1982, Jun (1987) finds that roughly 25 percent simultaneously repatriated dividends to their American parents and received from them new capital infusions. This fact not only seems to belie the trapped equity view of dividends but throws into question the skill of U.S. multinationals in avoiding taxes since two-way flows of funds between the U.S. parent and its more lightly taxed foreign subsidiary are always tax disadvantaged. Finally, Hines (1988b) observes that, even within the Hartman framework, particular features of the calculation of the indirect foreign tax credit should make dividend payouts (and subsidiary reinvestment decisions) sensitive to the tax and financial position of other subsidiaries; evidence for 1982 is consistent with important effects of these features.

Mutti (1981) analyzed repatriation patterns in data drawn from a large cross section of subsidiaries operating in eleven foreign countries in 1977. Dividends were the dominant form of repatriation in seven countries, including West Germany, which has an undistributed profits tax on corporate earnings. He finds a very low rank correlation coefficient between tax cost proxies and the relative role of dividends in total repatriations. When he controlled for industry effects, tax considerations appeared important. Dividend payments relative to earnings were negatively related to levels of interest and royalty payments (treated as predetermined in Mutti's estimating equation).

A number of studies of tax determinants of aggregate foreign direct investment also bear on the repatriation decisions of U.S. multinationals. Hartman (1981) and Boskin and Gale (1987) find the level of foreign direct investment out of retained earnings to be sensitive to rates of return and relative tax rates in the United States and abroad. The corollary of their finding is that repatriations are also sensitive to relative taxes. Newlon

(1987) broadly confirms their results, using adjusted data and a variety of econometric specifications.

5.2 Aggregate Repatriation Behavior

This section examines the pattern of aggregate repatriations by U.S. multinationals over the period 1962–82.[15] As illustrated in table 5.1, payouts from after-tax earnings are substantial, ranging for all industries from 21 percent in 1982 to 47 percent in 1962. The calculated payout rates are in line with those of U.S. domestic corporations reported in Poterba (1987).[16] Dividend payout rates are slightly higher for subsidiaries in manufacturing industries. Within manufacturing, there is significant variation across major industry groups—with, for example, high payout rates for motor vehicles (payouts exceeding current earnings in recession years) and low payouts in electronic equipment. Corresponding dollar volumes of dividends paid are reported in table 5.2. As table 5.2 indicates, the manufacturing industries account for by far the majority of the dividends received by U.S. multinational corporations each year.

Tables 5.3 and 5.4 report CFC dividends by country of their incorporation. The summary data in table 5.3 do not indicate a strong geographic pattern in dividend payout rates, suggesting that any effects that taxes may have on dividend distributions are likely to be operating through the particular circumstances of individual companies rather than a country's statutory tax rate on corporations. Table 5.4 exhibits dividend payout levels by country, illustrating the continuing importance of U.S. multinational operations in Canada, the United Kingdom, West Germany, France, Brazil, Mexico, and the Netherlands.

As noted earlier, dividends are not the only method by which a subsidiary can repatriate funds to its American parent. As shown in table 5.5, interest, rent, and royalty distributions are important as well. In the years for which separate data on the distributions are available, interest, rents, and royalties account for 43 percent of the (sum of the) distributions in 1976, 31 percent in 1974, 30 percent in 1972, and 39 percent in 1968. Here again, there is substantial variation across major industry categories, with interest, rents, and royalties virtually nonexistent in trade and very important in services. Within manufacturing, motor vehicles—an industry with relatively high dividend payouts—distributed little in the form of interest, rents, and royalties, while nonelectrical machinery relied more heavily on nondividend distributions.

Even apart from considerations of transfer pricing, focusing on dividend distributions from subsidiaries to parents directly may seriously underestimate total payments. In particular, dividends are often distributed to domestic subsidiaries of the U.S. parent company or distributed to another one of the parent's foreign subsidiaries. Table 5.6 documents the importance

of these indirect distributions for selected years in which detailed data are available. In 1976 and 1982, for example, more dividends were paid indirectly to the parent than directly. In other years for which relevant data are available, direct payments are only about two-thirds of total dividend distributions.

In table 5.7, we reevaluate the magnitudes of dividend distributions (out of after-tax and also out of pre-tax current earnings) for selected years. The payout ratios reported in table 5.7 represent distributions made directly to the U.S. parent and to other U.S (domestic) corporations controlled by the parent. These payout ratios still understate total dividend distributions in the years reported since payments to other subsidiaries of the same parent are not included. Nonetheless, the payout ratios are quite high, exceeding 40 percent for all industries in most years (based on after-tax earnings); payouts are higher in manufacturing industries than average payouts for all industries. The payout rates reported in table 5.7 are substantially higher than those for domestic U.S. corporations noted previously in table 5.1.

As described in section 5.1, distributing dividends is not the only way in which CFCs can generate U.S. tax liabilities with their after-tax foreign earnings; CFCs are subject to the Subpart F rules that treat certain types of passive income and also foreign earnings reinvested in the United States as "deemed distributed" to American parents and hence currently taxable. Table 5.8 documents a dramatic rise in the level of Subpart F income over recent years.[17] Subpart F income rose from $60 million in 1968 (equal to 3 percent of actual dividend distributions [from table 5.7] that year) to $4.5 billion in 1982 (43 percent of actual dividends). Manufacturing industries accounted for the bulk of Subpart F income over this period, particularly the CFCs in petroleum, chemicals, nonelectrical machinery, and electronic equipment industries; motor vehicles CFCs became important sources of Subpart F income in 1982.

Since Subpart F income produces a U.S. tax liability very similar to the liability generated by an actual dividend repatriation, repatriated actual dividends *plus* deemed distributions indicate the fraction of foreign income subject to U.S. taxation each year.[18] From the percentages in tables 5.7 and 5.8, it is clear that the fraction has been rising over time. One likely explanation for the recent increase in Subpart F income is the secular rise in interest rates and the corresponding rise in the returns to CFCs' passive investments. But, more broadly, Subpart F income reflects a pattern of increasing repatriations, with Subpart F one vehicle for those repatriations. Unlike actual dividend distributions, of course, Subpart F income does not make funds directly available to the parent. However, making passive foreign investments and incurring Subpart F liabilities—rather than distributing dividends—allows a CFC's U.S. parent to defer U.S. tax liability on the principal amount reinvested since Subpart F applies only to the return on the reinvested funds. The rise in Subpart F income, then, assuming the

primary source of that income to be passive investments, reflects an even larger rise in foreign-earned income that U.S. multinationals have chosen not to reinvest actively abroad.

U.S. multinationals are also required to pay U.S. taxes on the current earnings (and deduct against U.S. income the current losses) of their foreign branches. Since branch income is not eligible for deferral of U.S. taxes, it is clearly not in the interest of tax-avoiding U.S. multinationals to organize their profitable operations in low-tax foreign countries as branches rather than subsidiaries. The literature suggests that two types of firms might benefit from branch rather than subsidiary organization: petroleum firms that can recognize up-front tax losses from the special deductions for dry wells and depletion allowances and banks that can avoid onerous foreign regulations by not incorporating in foreign countries.

Table 5.9 indicates the importance of foreign branch operations of U.S. multinationals for the three years for which separate data on branches are available: 1982, 1980, and 1976. Total branch income (net of foreign taxes) in 1982 and 1980 is roughly equal to subsidiary dividend payments to U.S. parents and their domestic subsidiaries (from table 5.6), while in 1976 branch income is about half of U.S.-taxable dividends. The industry composition of branch income is quite different from that of dividends, however. Finance, insurance, and real estate (FIRE) firms earn more than half of total branch income, and petroleum companies earned more than half of the non-FIRE branch income in 1982 and 1980.[19] The FIRE branches were rather lightly taxed, while manufacturing branches endured foreign tax rates that average 73 percent in 1982, 68 percent in 1980, and 89 percent in 1976. Since parent U.S. companies average their branch income with the dividends they receive from subsidiaries in calculating their foreign tax credits, these highly taxed manufacturing branches may act as "tax cows" for American parents that also have lightly taxed subsidiaries from which they can repatriate dividends to soak up foreign tax credits from their branches.[20] Whether the tax credits from foreign branches can help explain subsidiary dividend behavior requires an examination that only firm-level data can provide.

5.3 Repatriation Behavior in 1984: Evidence from Micro Data

5.3.1 Summary Evidence from the Data

We now analyze the dividend payout behavior of U.S. multinationals in 1984, using subsidiary-level tax information. These micro data argue for a very different interpretation of multinational behavior than one might suppose from the aggregate numbers. In particular, we find strong evidence in favor of the view that multinationals very effectively minimize their U.S. taxes.

Our data were provided by the U.S. Department of the Treasury and consist of information on the tax returns filed by large U.S. multinationals with controlled foreign corporations in 1984.[21] Out of roughly 18,000 controlled foreign corporations in this sample, we excluded firms whose American parents had overall net operating losses and hence were untaxable on their foreign income that year. In addition, exclusions for inactive corporations, corporations filing part-year returns, missing variables, and obviously miscoded data reduce the sample to 12,041 foreign corporations and 453 American parent corporations. While the Internal Revenue Service estimated that a total of 45,000 CFCs would file information returns in 1984 (see Skelly and Hobbs 1986), we believe that our sample captures most of the economically significant CFCs.[22] The sample does not include American multinationals whose only foreign affiliates are branches or those with no controlled foreign corporations among their subsidiaries. Furthermore, the data span only one tax year. While cross-sectional data are not ideal for our purposes, the year 1984 offers a distinct advantage over years such as 1982 and 1980. Recessions in 1982 and 1980 created tax losses for CFCs and their American parents, reducing their chances of filing important tax forms and making their taxable incomes particularly unreliable proxies of permanent incomes. By contrast, 1984 was a year of economic expansion in the United States and abroad.

Most significantly, the micro data enable us to examine whether the summary information on distributions obtained from aggregate data reflect similar patterns among relatively homogeneous CFCs. In fact, we find much the opposite to be true. Most CFCs paid no dividends, though a minority made large payouts. Below, we first report some summary tabulations of the data. We then estimate a simple model of the response of CFC payouts to changes in the tax price of dividends, incorporating features of the domestic tax code that change the tax price regime.

Based on the data for 12,041 CFCs in 1984, the average dividend payout rate (out of after-tax earnings) to U.S. parents and their domestic subsidiaries is 42.1 percent. Including interest, rent, and royalties raises the distribution rate to over 60 percent. At first glance, such average payout figures seem consistent with the Treasury data for earlier years discussed above. However, summary figures for the micro data obscure important heterogeneity in patterns of repatriations. To illustrate this simply and starkly, we decompose (in table 5.10) the sample into four cells, according to whether "dividends" or "interest, rent, and royalties" (added together)[23] distributed to the American parent are greater than zero. For each cell, we report levels of assets, pre-tax earnings, after-tax earnings, dividends, interest, rent, and royalties as well as the numbers of CFCs and U.S. parents involved.

First, we observe that 69 percent of the CFCs—8,277 of them, accounting for 46 percent of total CFC assets and 33 percent of total after-tax

earnings—paid *no* dividends and *no* interest, rent, or royalties in 1984.[24] An additional 1,815 CFCs—with 23 percent of the assets and 17 percent of after-tax earnings—paid interest, rent, and royalties but no dividends; their interest, rent, and royalty distributions equaled 65 percent of their after-tax earnings. The 732 CFCs—with 15 percent of the total assets and 19 percent of total after-tax earnings—who paid both dividends and interest, rents, and royalties distributed more than their current after-tax earnings through the two channels. Finally, the 1,217 CFCs—with 17 percent of total assets and 30 percent of after-tax earnings—who paid only dividends had an average payout rate of 86 percent. In short, dividend distributions are highly skewed; 84 percent of the CFCs paid no dividends at all.

It is difficult to reconcile these patterns within a strict agency cost model of multinational dividend behavior. In that framework, the managers of 84 percent of the universe of CFCs are unfettered by the requirement to pay dividends each year. Of course, the use of a single annual cross section may obscure the payout behavior of firms that pay regular dividends on a less than annual basis, and some parent firms may use nondividend payout methods to control their CFCs. More than eight thousand CFCs, however, pay zero dividends, interest, rents, and royalties to their American parents and their domestic subsidiaries.

On the other hand, the data in table 5.10 appear to be quite consistent with a tax-minimization model of multinational firm behavior. Most CFCs avoid current U.S. tax liability on their foreign earnings. And the selection of dividends rather than other forms of repatriation is consistent with tax-minimizing principles: CFCs paying dividends but no interest, rent, and royalties faced on average lower tax rates (34 percent) than those choosing to pay interest, rent, and royalties but no dividends (51 percent).

Some of the complicated financial arrangements used by multinationals can complicate interpretation of the statistics presented in table 5.10. In particular, it is possible that a relatively small number of foreign holding companies (owned by American parents) themselves own the shares of many of the CFCs in our sample; the dividends that they receive from the "second-tier" CFCs they own would not appear as repatriated by those CFCs to American parents and their domestic subsidiaries, even if the holding companies then turned around and sent the profits back to the United States. Those dividends would appear as repatriated by the holding companies, but such schemes would be consistent with small numbers of CFCs making dividend repatriations at the same time that aggregate dividends are large.

In fact, CFCs identified as nonbank holding companies are relatively unimportant in the sample, as are the FIRE industries generally; the sum of dividends paid by FIRE CFCs equals $1.0 billion. Table 5.11 provides further confirmation that financial flows within multinational firms do not greatly complicate the interpretation of table 5.10. Table 5.11 presents a

breakdown of CFC financial behavior that includes dividends and interest, rents, and royalties received from other CFCs of the same American parent. As the table indicates, dividend flows from one CFC to another owned by the same parent are very small, grossing only $190 million for the whole sample. Interest, rent, and royalty payments are significantly larger, grossing $3.4 billion, but the majority are received by CFCs that pay nothing to their American parents. With some adjustments, then, it remains true that most CFCs appear to generate no U.S. tax liability on their income each year.

Section 5.2 illustrates the increasing significance of Subpart F income over time both absolutely and as a fraction of U.S.-taxable income of CFCs. Table 5.10 presents information on the Subpart F income of CFCs in different repatriation regimes. Total Subpart F income in 1984 was $3.3 billion, representing a reduction from its level in 1982. In addition, Subpart F income is heavily concentrated in CFCs that pay no dividends, a fact consistent with the view that some CFCs place their foreign earnings in passive foreign investments and incur Subpart F liabilities as a tax-minimizing strategy (relative to paying dividends directly). Use of such a strategy makes little sense, of course, in the presence of significant costs of intrafirm control.

The foreign tax credit status of a parent firm directly affects the tax cost of its CFCs' repatriations. Table 5.12 offers fine detail on parent firms' foreign tax credit positions and the Subpart F payouts of the non-FIRE CFCs described in table 5.10. Several features of these decompositions are of interest. First, sizable shares of total CFC assets (38 percent), after-tax earnings (45 percent), and dividends (53 percent) are accounted for by CFCs of firms with excess foreign tax credits. Second, firms with deficit foreign tax credits account for a disproportionate share (63 percent) of repatriations in the form of interest, rent, and royalties. This pattern is consistent with tax-minimizing behavior by CFCs whose host governments permit them to adjust their interest, rent, and royalty payments to related parties. Third, deficit foreign tax credit firms also account for a disproportionate share (58 percent) of Subpart F income, again in accord with tax-minimizing principles.

Given the small number of CFCs that pay dividends at all and the excess foreign tax credit status of U.S. parents that receive about half the dividends, the question arises of how much tax revenue the U.S. government collects on the profits earned by foreign subsidiaries of U.S. multinationals. Table 5.13 breaks down by foreign tax rate those CFCs that either pay dividends or incur Subpart F liabilities and whose parents have deficit foreign tax credits. The top panel presents data on CFCs whose payout is less than their current-year earnings and profits; the CFCs in the bottom panel have payouts greater than current-year earnings. For the latter, it is unfortunately impossible to identify from tax-form data their deemed-paid credits on that

part of their payouts that exceed current-year income; still, current tax rates seem to be reasonable proxies for tax rates in earlier years.

There is substantial variation in foreign tax rates for these CFCs,[25] with about half the dividends coming from CFCs facing tax rates of over 40 percent. In addition, there is some bunching at the lower ranges. For Subpart F income, the pattern is, as one might expect, different; the CFCs earning Subpart F income are lightly taxed by foreign governments. Since American parents receive foreign tax credits for the foreign taxes paid by the CFCs described in table 5.13 (and also receive credits for any foreign withholding taxes paid on repatriation of those dividends), the residual after-credit income taxes paid to the U.S. government on CFC earnings in 1984 are very small. However, these small tax collections are associated with a system that has a large effect on CFC financial transactions generally, as we demonstrate below.

Our finding that U.S. taxation of dividend repatriations from multinationals raises very little revenue for the U.S. government needs to be qualified by the broader context of the tax system. The (potential) U.S. taxation of dividends may prompt CFCs to remit more U.S.-taxable interest, rent, and royalties than they otherwise would. In our sample of non-FIRE CFCs, only one-third of the interest, rent, and royalty payments ($1.5 billion out of $4.5 billion) were received by parents with excess foreign tax credits; the remaining two-thirds were presumably taxable at full rates. In addition, foreign earnings of CFCs may generate U.S. tax revenue through the taxation of domestic U.S. shareholders of parent companies since they are taxed on any added dividends the company pays because of its foreign earnings and they may pay capital gains taxes on share price appreciation from foreign earnings as well.

5.3.2 Estimating the Effects of Taxation on Repatriations

Because so many CFCs in our sample do not pay any dividends, estimating a simple regression model of dividend distributions is clearly inappropriate. In particular, estimated tax price effects in such a regression are biased toward zero. Simple probit models (not reported) reinforce the patterns noted in our discussion of table 5.12. The primary determinants of whether a CFC pays a dividend are the excess credit position of its parent and the amount of distributions in the form of interest, rent, and royalties. Industry effects do not appear to be very important in this respect.

We begin with a basic model of the form

$$D_i = (\alpha_0 + \alpha_1 \mathrm{TAX}_{ij})E_i + \beta' X_j, \tag{3}$$

where j and i index the parent and the CFC, respectively; D and E represent dividends and after-foreign-tax earnings of the CFC, respectively; and both

D and E are deflated by CFC assets.[26] TAX_{ij} represents the tax price to U.S. parent j of distributions from CFC i. X_j is a vector of parent j's characteristics. If the parent is in a deficit credit position, the tax price is given in equation (1).[27] For parents in excess credit positions, we take the U.S. tax price to be zero, [28] though the parent may owe withholding taxes on the dividends that cannot be credited against U.S. tax liabilities.

With panel data, one would incorporate the excess credit/deficit credit position of the parent in a switching-regime model. Indeed, if one could parameterize the transition process (from excess credit to deficit credit position), it would be possible in principle to estimate the average probability of being in one regime or the other. We, of course, have only a single cross section of data in which to observe the two regimes. The credit position is still endogenous. For example, higher payouts from CFCs with low tax prices make the parent firm more likely to have excess foreign tax credits. Indeed, even the location (and hence the foreign tax rate) of a CFC may be endogenous with respect to the tax rates of its parent's other CFCs. Potential instrumental variables to identify the credit regime include branch income, branch taxes, and interest, rent, and royalties (to the extent that they are exogenous). Unfortunately, the tax data do not come in a form that permits one to identify this non-CFC income and foreign taxes (of the parent) in order to employ an instrumental variables procedure. Accordingly, we take the excess credit/deficit credit position of the parent as exogenous to the CFC payout decision.[29]

Given the significance (revealed by the summary of the data) of the discrete choice of whether to pay a dividend, we estimated a Tobit model of dividend distributions. There are two regimes (corresponding to the parent's credit position). To illustrate, we define a dummy variable X equal to unity if the parent is in an excess credit position (and equal to zero otherwise) and estimate:

$$(4) \quad D_i = (\beta_0 + \beta_1 TAX_i + \beta_2 X_i) + [\beta_3 + \beta_4(1 - X_i)TAX_i]E_i \quad \text{if } D_i > 0,$$
$$= 0 \quad \text{otherwise.}$$

That is, we allow the intercept to shift if the parent is in an excess credit position. We also included on the right-hand side of equation (4) major industry dummy variables[30] and the parent firm's ratio of its dividends paid to stockholders to its assets.

The first column of table 5.14 presents estimated coefficients from (4).[31] The principal findings can be summarized as follows. Conditional on the CFC's paying dividends and its parent's having deficit credits, the tax price of CFC dividends has a negative effect on distributions. The response of the payout rate to a 1 percentage point decrease in TAX is an increase of 0.16 percentage points. Evaluated at average values of the tax price, a 1 percentage point decrease in the U.S. corporate tax rate would raise the

payout (relative to assets) by 0.28 percentage points, or about 4 percent of the mean CFC payout relative to assets. One cannot necessarily extrapolate such a change to evaluate the effects of a large reduction in corporate taxes such as that enacted in the Tax Reform Act of 1986 since the lower tax rate affects the probability of being in an excess credit position. When the parent has excess foreign tax credits, payout is increased, ceteris paribus.

The ratio of parent dividends to parent assets has a strong and positive effect on CFC distributions. This is consistent with a view that parents for whom agency problems of control (between domestic shareholders and domestic management) are most severe have higher payouts and, ceteris paribus, demand more cash from their CFCs to make these payments. Alternatively, domestic parents receiving dividends from their CFCs find uses for those funds, one of which is to distribute dividends to shareholders. Finally, coefficient estimates are not dramatically changed whether or not industry dummies are included. Table 5.14 does not report coefficients for industry dummies when they are present; breakdowns within manufacturing generally had estimated effects on payouts that were neither statistically significant nor economically important.

In the third column of table 5.14, we report results of estimating the same model, redefining the dependent variable to include Subpart F income. The estimated coefficients are similar to those in the first two columns, a result consistent with behavior by multinationals that treats Subpart F income as similar to dividend income.

5.4 Summary and Implications

Despite the growing importance of activities of overseas affiliates of U.S. firms, relatively little is known about multinationals' decisions to repatriate their foreign earnings. Analyses of aggregate data (and of data disaggregated to the level of major industry categories) on distributions by foreign subsidiaries of U.S. multinationals point to significant levels of repatriations of current earnings. Given the (domestic) tax costs of this activity, it seems at first surprising that subsidiaries should pay so much in dividends. The application of models of domestic firms' dividend decisions to this case is not straightforward, however. First, the aggregate data mask the fact that distributions are skewed; most subsidiaries pay no dividends. Second, the combination of deferral and granting credits for foreign taxes paid implies that many repatriating firms have excess foreign tax credits, so that the tax price of repatriations is not what it appears.

Understanding links between taxation and subsidiary repatriation decisions is important for assessing the effect of "dividend taxes" on the cost of capital. Under the "trapped equity" view of the dividend decision (in which repatriations are residuals in CFC accounts), only the foreign corporate tax

rate matters for the cost of capital. Alternatively, when dividend patterns are of concern to the parent (e.g., for agency cost reasons), both domestic and foreign tax rates matter for the cost of capital.

Our results demonstrate that such simple pedagogical cases are likely to be difficult to apply. The relative unimportance of industry effects—as proxies for investment opportunities—within broad industry groups (such as manufacturing) casts doubt on the pure trapped equity view. For firms in deficit credit positions, we do find that shifts in the tax prices of their repatriations matter, in support of the view that parents value some stream of repatriations, trading off perceived benefits with tax costs. However, many firms are in excess credit positions. The interaction of (i) the credit system that adjusts for the burden of foreign taxes and (ii) deferral by taking subsidiary income only when repatriated implies that at any point in time many subsidiaries (most, in our sample) are likely to be at corner solutions, paying no dividends.

One concern stemming from our findings is that—if 1984 is a representative year—many U.S. parents are able to take advantage of intrafirm financial transactions and their abilities to time repatriations in order to reduce their U.S. tax liabilities. That is, the combination of the credit system and deferral can diminish substantially the revenue raised by the United States from the taxation of overseas operations of U.S. multinationals.[32] Given the volume of activity conducted by foreign affiliates of U.S. firms, these revenue consequences of the present system may be important. Of course, the recent reduction in the U.S. statutory tax rate from 46 to 34 percent increases the likelihood that many multinational firms will have excess foreign tax credits.[33] The effect of the rate reduction may be offset somewhat by the introduction of new functional baskets of foreign income and new methods of calculating indirect foreign tax credits introduced by the Tax Reform Act of 1986, but it remains to be demonstrated that the current system of taxing foreign subsidiaries of U.S. multinationals can generate significant amounts of tax revenue.

We believe that our analysis suggests the importance of modeling explicitly the margins on which payments from subsidiaries to parents are accomplished. The present U.S. system of taxing multinationals' income may be raising little U.S. tax revenue while stimulating a host of tax-motivated financial transactions. Whether current U.S. policy is a sensible approach depends very much on what we intend our international tax laws to do.

Appendix
Sources for Dividend Tables

[1] U.S. Department of the Treasury, Internal Revenue Service. Supplemental Report, *Statistics of Income* 1962. "Foreign Income and Taxes Reported on Corporation Income Tax Returns." Washington, D.C.: U.S. Government Printing Office.

[2] _____. Supplemental Report, *Statistics of Income* 1964, 1965, 1966. "Foreign Income and Taxes Reported on Corporation Income Tax Returns." Washington, D.C.: U.S. Government Printing Office.

[3] _____. Supplemental Report, *Statistics of Income* 1968, 1972. *International Income and Taxes*. "U.S. Corporations and Their Controlled Foreign Corporations." Washington, D.C.: U.S. Government Printing Office.

[4] _____. Supplemental Report, *Statistics of Income* 1968–72. *International Income and Taxes*. "Foreign Tax Credit Claimed on Corporation Income Tax Returns." Washington, D.C.: U.S. Government Printing Office.

[5] _____. Supplemental Report, *Statistics of Income* 1974. *International Income and Taxes*. "Foreign Tax Credit Claimed on Corporation Income Tax Returns." Washington D.C.: U.S. Government Printing Office.

[6] _____. Supplemental Report, *Statistics of Income* 1974–78. *International Income and Taxes*. "U.S. Corporations and Their Controlled Foreign Corporations." Washington, D.C.: U.S. Government Printing Office.

[7] _____. Supplemental Report, *Statistics of Income* 1976–79. *International Income and Taxes*. "Foreign Income and Taxes Reported on U.S. Income Tax Returns." Washington, D.C.: U.S. Government Printing Office.

[8] _____. 1985. "Compendium of Studies of International Income and Taxes, 1979–1983." Washington, D.C.: U.S. Government Printing Office.

[9] Barlow, Mary. 1986. "Foreign Tax Credit by Industry, 1982." U.S. Department of the Treasury, Internal Revenue Service, *SOI Bulletin* 5(4): 9–29.

[10] Carson, Chris. 1986. "Corporate Foreign Tax Credit, 1982: A Geographic Focus." U.S. Department of the Treasury, Internal Revenue Service, *SOI Bulletin* 6(2): 21–47.

[11]Simenauer, Ronald. 1986. "Controlled Foreign Corporations, 1982: An Industry Focus." U.S. Department of the Treasury, Internal Revenue Service, *SOI Bulletin* 6(1): 63–86.

[12] States, William. 1986–87. "Controlled Foreign Corporations, 1982: A Geographic Focus." U.S. Department of the Treasury, Internal Revenue Service, *SOI Bulletin* 6(3): 49–80.

Table 5.1 **Dividends Paid by CFCs to U.S. Parents as a Share of CFC Post-tax Earnings (%)**

U.S. Industry	1982	1980	1976	1974	1972	1968[a]	1966[a]	1965[a]	1962[a]
All industries	21	27	21	31	33	43	33	38	47
Mining	28	8	12	15	31	23	21	17	24
Construction	15	8	9	11	35	33	19	16	20
Manufacturing	24	30	22	32	35	45	34	38	50
Food	21	3238	22	18	30	48	34	29	62
Chemicals	29	26	32	31	33	47	42	34	40
Petroleum	20	27	23	26	44	84	36	49	58
Nonelectrical machinery	10	43	12	36	39	32	32	31	34
Electronic equipment	22	13	18	11	16	24	14	17	38
Motor vehicles	231	97	23	142	43	41	68	60	71
Transportation and public utilities	7	16	13	21	11	24	31	28	35
Trade	19	15	39	33	15	26	29	37	40
FIRE[b]	5	11	4	19	27	39	34	41	46
Banking	2	3	3	42	17	40	25	33	50
Insurance carriers	14	2	5	5	20	50	6	0	0
Services	11	22	10	66	27	36	24	69	23
Total of manufacturing six	22	31	21	32	37	47	38	40	53
Total manufacturing, except six	33	26	33	32	27	38	23	32	40
All U.S. Corporations[c]	69	33	29	29	39	43	37	38	43

Sources: 1982 table 1, pp. 75–80 in [11]; 1980 table 1, pp. 190–95 in [8]; 1976 table 11, pp. 262–85 in [7]; 1974 table 2, pp. 14–33 in [6]; 1972 table 16, pp. 93–97 in [3]; 1968 table 2, p. 17 in [3]; 1966 table 29, pp. 270–73 in [2]; 1965 table 25, pp. 254–57 in [2]; 1962 table 13, p. 86 in [1].

[a]1968 dividends paid to related persons, 1966 payments by directly owned foreign corporation, 1965 payments by directly owned foreign corporation, and 1962 dividends paid to domestic corporation. 1972–82 U.S. corporations with assets of at least $250 million.

[b]Finance, insurance, and real estate.

[c]Figures are adapted from Poterba (1987).

Table 5.2 **Dividends Paid by CFCs to U.S. Parents**

U.S. Industry	1982	1980	1976	1974	1972	1968[a]	1966[a]	1965[a]	1962[a]
All industries	4,829	8,358	3,112	4,095	3,210	1,978	1,512	1,445	1,127
Mining	188	75	36	44	35	13	22	11	5
Construction	40	27	38	22	5	22	15	12	8
Manufacturing	4,224	7,635	2,624	3,747	2,985	1,775	1,345	1,237	968
Food	331	259	198	114	158	121	87	72	79
Chemicals	922	1,004	566	656	399	325	227	173	118
Petroleum	908	2,417	486	1,028	805	493	324	314	293
Nonelectrical machinery	383	1,825	317	655	618	175	179	135	52
Electronic equipment	295	254	182	97	118	107	42	35	42
Motor vehicles	324	196	359	569	345	193	251	269	197
Transportation and public utilities	85	113	36	48	27	21	13	15	13
Trade	187	294	350	178	59	87	71	91	76
FIRE	83	144	20	38	61	45	32	37	36
Banking	18	13	8	24	10	6	2	2	2
Insurance carriers	41	28	5	3	11	1	1	0	0
Services	21	69	8	15	20	20	19	43	24
Total of manufacturing six	3,163	5,956	2,108	3,119	2,443	1,414	1,110	998	780
Total manufacturing, except six	1,061	1,679	516	628	542	361	235	239	189

Sources: 1982 table 1, pp. 75–80 in [11]; 1980 table 1, pp. 190–95 in [8]; 1976 table 11, pp. 262–85 in [7]; 1974 table 2, pp. 14–33 in [6]; 1972 table 16, pp. 93–97 in [3]; 1968 table 2, p. 17 in [3]; 1966 table 29, p. 270–73 in [2]; 1965 table 25, p. 254–57 in [2]; 1962 table 13, p. 86 in [1].

Note: All figures are in millions of current dollars.

[a]1968 dividends paid to related persons, 1966 payments by directly owned foreign corporation, 1965 payments by directly owned foreign corporation, and 1962 dividends paid to domestic corporation. 1972–82 U.S. corporations with assets of at least $250 million.

Table 5.3 CFC Dividend Payout Ratios to U.S. Parents, by Country

Country of Incorporation of CFC	1982	1976	1974	1972	1968[a]	1962[a]
All countries	.21	.21	.22	.33	.30	.39
Canada	.30	.24	.18	.37	.25	.39
Mexico	−.24	.97	.14	.39	.28	.50
Brazil	.17	.15	.19	.20	.46	.06
Bahamas	.10	2.36	.39	.21	.13	.10
France	.89	.23	.13	.23	.42	.25
Netherlands	.17	.13	.05	−.20	.26	.20
United Kingdom	.12	.20	−.64	.27	.47	.56
West Germany	.26	.18	.45	.46	.38	.71
Japan	.21	.11	.20	.17	.12	.07
All others	.20	.20	.19	.30	.27	.30

Sources: 1982 table 1, pp. 63–65 in [12]; 1976 table 16, pp. 310–21 in [7]; 1974 table 7, pp. 61–84 in [6]; 1972 table 23, pp. 133–56 in [3]; 1968 table 8, pp. 43–64 in [3]; 1962 table 22, pp. 130–35 in [1].

[a]Payout ratios are calculated on after-tax earnings of the CFC. 1968 payments to all related persons. 1962 payments to domestic corporations.

Table 5.4 CFC Payouts to U.S. Parents, by Country

Country of Incorporation of CFC	1982	1976	1974	1972	1968[a]	1962[a]
All countries	4,829	3,112	4,095	3,210	1,423	1,133
Canada	1,034	797	888	783	325	316
Mexico	125	140	62	56	32	22
Brazil	197	102	94	59	58	3
Bahamas	35	33	171	40	11	5
France	216	113	116	124	54	24
Netherlands	115	57	40	53	18	11
United Kingdom	558	188	274	444	284	271
West Germany	428	414	679	440	172	151
Japan	51	36	80	42	9	1
All others	2,070	1,232	1,691	1,170	460	329

Sources: 1982 table 1, pp. 63–65 in [12]; 1976 table 16, pp. 310–21 in [7]; 1974 table 7, pp. 61–84 in [6]; 1972 table 23, pp. 133–56 in [3]; 1968 table 8, pp. 43–64 in [3]; 1962 table 22, pp. 130–35 in [1].

[a]All figures are in millions of current dollars. Payments to U.S. corporations filing returns. 1962 payments to domestic corporations. 1968 payments to all related persons.

Table 5.5 **Distribution Patterns: CFCs of U.S. Parents (Selected Years): Fraction of Pretax Earnings Plus Interest, Rent, and Royalties Distributed to U.S. Parents**

	Dividends				Interest, Rents, Royalties				Both			
U.S. Industry	1976	1974	1972	1968	1976	1974	1972	1968	1976	1974	1972	1968
All Industries	.12	.18	.19	.22	.09	.08	.08	.14	.21	.26	.27	.36
Mining	.08	.12	.22	.18	.03	.04	.12	.06	.11	.16	.34	.24
Construction	.06	.09	.21	.18	.10	.12	.11	.17	.16	.21	.32	.35
Manufacturing	.12	.19	.20	.23	.09	.07	.08	.13	.21	.26	.28	.36
Food	.13	.10	.18	.26	.06	.06	.05	.11	.19	.17	.23	.36
Chemicals	.18	.19	.19	.26	.09	.07	.09	.12	.27	.26	.28	.38
Petroleum	.16	.18	.31	.43	.02	.02	.03	.16	.18	.20	.34	.60
Nonelectrical machinery	.06	.17	.20	.14	.17	.18	.15	.18	.23	.35	.35	.32
Electronic equipment	.11	.06	.10	.23	.04	.05	.08	.09	.15	.11	.18	.22
Motor vehicles	.14	.64	.24	.21	.02	.04	.02	.06	.16	.68	.26	.28
Transportation	.07	.11	.07	.14	.12	.11	.08	.20	.19	.22	.15	.34
Trade	.21	.01	.10	.16	.00	.01	.01	.05	.21	.02	.11	.21
FIRE	.02	1.12	.13	.16	.11	.38	.19	.28	.13	1.50	.32	.44
Services	.04	.41	.13	.10	.39	.62	.20	.55	.43	.03	.33	.65
Total of six manufacturing	.12	.19	.21	.24	.09	.07	.08	.13	.21	.26	.29	.37
Total manufacturing, except six	.13	.19	.16	.20	.08	.06	.07	.13	.21	.25	.23	.33

Sources: 1976 table 11, pp. 270–85 in [7]; 1974 table 2, pp. 14–33 in [6]; 1972 table 16, pp. 93–97 in [3]; 1968 table 2, pp. 13–17 in [3].

Note: Figures are for U.S. corporations and their CFCs reported on Form 2952. Data for 1972–76 are for U.S. corporations with assets of at least $250 million.

Table 5.6 **Direct and Indirect Dividend Payments by CFCs to U.S. Parents**

	1982	1980	1976	1974	1972	1968
Dividends paid ($)	13,762	13,211	6,279	6,570	4,682	1,978
Fraction representing: (%):						
Payments to U.S. parent	35.1	63.3	49.6	62.3	68.6	72.2
Payments to U.S. subsidiaries of U.S. parent	40.3	17.4	26.8	37.7	31.4	27.8
Payments to foreign subsidiaries of U.S. parent	24.6	19.3	23.6			
Interest/dividends	N.A.	.36	.08	.24	.21	.24
Rent and royalties/dividends	N.A.	.34	.64	.30	.30	.39

Sources: 1982 table 1, pp. 75–80 in [12]; 1980 table 1, pp. 190–95 in [8]; 1976 table 11, pp. 262–85 in [7]; 1974 table 2, pp. 14–33 in [6]; 1972 table 16, pp. 93–97 in [3]; 1968 table 2, p. 17 in [3]

Note: Dollar amounts are in millions of current dollars.

Table 5.7 **Dividend Payouts by CFCs to U.S. Parents and Their Domestic Subsidiaries (%)**

	Payout Ratios								
U.S. Industry	1982	1980	1976	1974[a]	1972[a]	1968[a]	1966[a]	1965[a]	1962[a]
All industries	61	42	43	49	48	43	33	38	47
	(38)	(28)	(27)	(31)	(30)	(26)	(22)	(25)	(30)
Mining	84	36	50	24	31	23	21	17	24
	(45)	(28)	(36)	(21)	(25)	(19)	(17)	(13)	(19)
Construction	79	54	29	15	35	33	19	16	20
	(57)	(45)	(23)	(12)	(24)	(22)	(15)	(14)	(16)
Manufacturing	63	44	44	51	35	45	34	38	50
	(38)	(28)	(27)	(33)	(22)	(27)	(22)	(25)	(32)
Food	60	5375	42	46	30	48	34	29	62
	(38)	(59)	(27)	(28)	(19)	(29)	(23)	(19)	(36)
Chemicals	56	41	49	46	33	47	42	34	40
	(33)	(26)	(32)	(30)	(21)	(30)	(28)	(22)	(26)
Petroleum	74	37	43	51	44	84	36	49	58
	(44)	(25)	(30)	(35)	(32)	(52)	(27)	(34)	(44)
Nonelectrical machinery	43	56	47	50	39	32	32	31	34
	(26)	(36)	(28)	(30)	(23)	(17)	(20)	(18)	(21)
Electronic equipment	61	38	50	43	16	24	14	17	38
	(40)	(26)	(31)	(27)	(11)	(14)	(9)	(11)	(23)

(continued)

Table 5.7 (continued)

U.S. Industry	Payout Ratios								
	1982	1980	1976	1974[a]	1972[a]	1968[a]	1966[a]	1965[a]	1962[a]
Motor vehicles	376	168	31	161	43	41	68	60	71
	(101)	(39)	(19)	(76)	(25)	(23)	(40)	(35)	(41)
Transportation and public utilities	39	50	47	35	11	24	31	28	35
	(31)	(35)	(31)	(24)	(8)	(17)	(23)	(18)	(27)
Trade	69	23	41	36	15	26	29	37	40
	(49)	(17)	(22)	(21)	(10)	(17)	(19)	(25)	(23)
FIRE	37	32	37	48	27	39	34	41	46
	(26)	(23)	(24)	(27)	(16)	(23)	(25)	(32)	(31)
Services	49	38	25	83	27	36	24	69	23
	(27)	(23)	(16)	(43)	(17)	(22)	(16)	(47)	(12)
Total of manufacturing six	63	46	44	53	37	47	38	40	53
	(37)	(29)	(28)	(34)	(23)	(28)	(25)	(26)	(35)
Total manufacturing, except six	65	40	42	41	27	38	23	32	40
	(41)	(26)	(25)	(26)	(17)	(23)	(15)	(21)	(25)

Sources: 1982 table 1, pp. 75–80 in [11]; 1980 table 1, pp. 190–95 in [8]; 1976 table 11, pp. 262–85 in [7]; 1974 table 2, pp. 14–33 in [6]; 1972 table 16, pp. 93–97 in [3]; 1968 table 2, p. 17 in [3]; 1966 table 29, pp. 270–73 in [2]; 1965 table 25, pp. 254–57 in [2]; 1962 table 13, p. 86 in [1].

Note: Data are for U.S. corporations and their CFCs reported on Form 2952. Payout ratios based on after-tax earnings appear first; payout ratios based on pretax earnings are in parentheses. 1972–82: U.S. corporations with assets of at least $250 million.

[a]1968 dividends paid to related persons, 1966 and 1965 payments by directly owned foreign corporation, 1962 dividends paid to domestic corporations, and 1972 and 1974 dividends include payments to foreign subsidiaries of U.S. corporations.

Table 5.8 Subpart F Income of U.S. CFCs Relative to CFC Dividend Payouts

U.S. Industry	1982	1980	1976	1974	1972[a]	1968[a]
All industries	$4,466	2,579	823	359	96	60
	(.43)	(.24)	(.17)	(.05)	(.02)	(.03)
Mining	156	58	18	1	4	. . .
	(.33)	(.19)	(.16)	(.01)	(.07)	. . .
Construction	43	108	15	1	6	2
	(.22)	(2.51)	(.31)	(.03)	(.23)	(.13)
Manufacturing	3,498	2,060	736	327	73	39
	(.42)	(.22)	(.18)	(.05)	(.02)	(.02)
Food	151	78	39	9	18	5
	(.22)	(.24)	(.13)	(.03)	(.07)	(.04)
Chemicals	609	518	174	20	13	13
	(.41)	(.44)	(.25)	(.02)	(.02)	(.04)
Petroleum	731	574	278	236	. . .	. . .
	(.33)	(.20)	(.41)	(.12)	. . .	. . .
Nonelectrical machinery	307	234	39	5	6	10
	(.22)	(.12)	(.04)	(.01)	(.01)	(.06)
Electronic equipment	239	185	49	15	11	1
	(.44)	(.33)	(.13)	(.04)	(.04)	(.01)
Motor vehicles	1,112	56	13	5	2	. . .
	(2.79)	(.21)	(.03)	(.01)	(.01)	. . .
Transportation and public utilities	348	92	8	6	6	4
	(.98)	(.41)	(.06)	(.07)	(.09)	(.19)
Trade	146	131	32	11	. . .	4
	(.24)	(.37)	(.09)	(.06)	. . .	(.05)
FIRE	249	97	7	9	5	8
	(.80)	(.32)	(.08)	(.10)	(.05)	(.18)
Banking	198	33	3	5	1	. . .
	(1.35)	(.28)	(.04)	(.16)	(.07)	. . .
Insurance carriers	31	28	2	4	. . .	. . .
	(.38)	(.64)	(.22)	(.44)	. . .	. . .
Services	24	32	5	4	1	3
	(.29)	(.34)	(.26)	(.17)	(.03)	(.15)
Total of manufacturing six	3,149	1,645	592	290	50	29
	(.47)	(.23)	(.18)	(.06)	(.01)	(.02)
Total manufacturing, except six	349	415	144	37	23	10
	(.22)	(.19)	(.20)	(.05)	(.03)	(.07)

Sources: 1982 table 1, pp. 75–80 in [11]; 1980 table 1, pp. 190(N95 in [8]; 1976 table 11, pp. 262–85 in [7]; 1974 table 2, pp. 14–33 in [6]; 1972 table 16, pp. 93–97 in [3]; 1968 table 2, p. 17 in [3]; 1966 table 29, pp. 270–73 in [2]; 1965 table 25, pp. 254–57 in [2]; 1962 table 13, p. 86 in [1].

Note: Dollar amounts in millions are includable (Subpart F) income of CFCs. Figures in parentheses are ratios of Subpart F income to dividends paid by CFCs to U.S. corporations and their domestic subsidiaries.

[a]1972 and 1968 dividend payments include dividends paid to foreign subsidiaries of the U.S. parent.

Table 5.9 **Foreign Branches of U.S. Corporations: Income and Foreign Taxes**

	1982			1980			1976		
	After-tax Branch Income ($)	Foreign Branch Tax Rate	After-tax Branch Income as a Share of CFC Dividends Paid[a]	After-tax Branch Income ($)	Foreign Branch Tax Rate	After-tax Branch Income as a Share of CFC Dividends Paid[a]	After-tax Branch Income ($)	Foreign Branch Tax Rate	After-tax Branch Income as a Share of CFC Dividends Paid[a]
All industries	8,942	.39	.86	11,783	.46	1.11	2,267	.65	.47
Mining	338	.24	.71	308	.66	1.01	350	.63	3.18
Construction	7	.70	.04	19	.42	.44	14	.22	.29
Manufacturing	1,754	.73	.21	4,229	.68	.45	373	.89	.09
Food	73	.57	.11	99	.46	.30	72	.45	.23
Chemicals	125	.80	.09	490	.49	.41	7	.91	.01
Petroleum	1,194	.76	.54	2,945	.72	1.02	102	.96	.15
Nonelectrical machinery	128	.50	.09	72	.63	.04	86	.46	.10
Electronic equipment	186	.49	.34	255	.38	.46	−11	1.55	−.03
Motor vehicles	54	.29	.14	29	.52	.11	15	.52	.04
Transportation and public utilities	76	.24	.21	33	.46	.15	24	.37	.25
Trade	−7	1.41	−.01	93	.27	.26	28	.33	.08
FIRE	6,789	.08	21.83	7,071	.07	23.18	1,470	.18	15.98
Banking	6,638	.08	45.16	7,024	.06	60.03	1,359	.17	19.41
Insurance carriers	139	.31	1.70	54	.41	1.23	74	.24	8.22
Services	−15	6.00	−2.18	27	.41	.28	7	.36	.37
Total of manufacturing six	1,760	.73	.26	3,890	.69	.54	271	.92	.08
Total manufacturing, except six	−6	1.09	.00	339	.47	.16	102	.53	.14

Sources: 1982 table 1, pp. 19–26 in [9]; 1980 table 1, pp. 51–59 in [8]; 1976 table 2, pp. 92–99 in [7].

[a]Dividends paid include payments to U.S. parent and its domestic subsidiary.

Note: Dollar figures are in millions. Data obtained from Form 1118, U.S. corporation returns.

Table 5.10 **Distribution Breakdowns: Micro Data on U.S. CFCs in 1984**

	Assets ($)	Pretax Earnings ($)	After- tax Earnings ($)	Average Tax Rate (%)	Dividends ($)	Interest, Rent, Royalties ($)	Subpart F ($)	Number of: CFCs	Number of: Parents
Dividends and interest, rent, royalties > 0	55.1 (.15)	7.90 (.19)	4.54 (.19)	42.5	3.8 (.38)	1.95 (.42)	0.33 (.10)	732 (.06)	183
Dividends > 0; interest, rent, royalties = 0	62.7 (.17)	11.1 (.26)	7.3 (.30)	34.2	6.3 (.63)	0 (0)	.63 (.19)	1,217 (.10)	252
Dividends = 0; interest, rent, royalties > 0	83.7 (.23)	8.5 (.20)	4.2 (.17)	50.6	0 (0)	2.73 (.58)	.74 (.23)	1,815 (.15)	288
Dividends and interest, rent, royalties = 0	169.6 (.46)	14.4 (.34)	8.0 (.33)	44.4	0 (0)	0 (0)	1.58 (.48)	8,277 (.69)	433

Source: Authors' tabulations based on U.S. Treasury data described in the text.

Note: Dollar amounts are in billions of dollars. Figures in parentheses are shares of column totals.

Table 5.11 Financial Flows between Parties Related to U.S. CFCs, 1984 ($)

	Dividends		Interest, Rent, Royalties	
	Received	Paid to U.S.	Received	Paid to U.S.
Dividends and interest, rent, royalties > 0	.048 (.25)	3.8 (.38)	.200 (.06)	1.95 (.42)
Dividends > 0; interest, rent, royalties = 0	.075 (.39)	6.3 (.62)	.400 (.12)	0 (0)
Dividends = 0; interest, rent, royalties > 0	.030 (.16)	0	.716 (.21)	2.73 (.58)
Dividends and interest, rent, royalties = 0	.037 (.20)	0	2.129 (.62)	0 (0)

Source: Author's tabulations based on U.S. Treasury data described in the text.

Note: Dollar amounts are in billions of dollars. Figures in parentheses are shares of column totals.

Table 5.12 **Distribution Breakdowns: Detail on Credit Position and Subpart F Liabilities, 1984**

	Billions of Dollars						Number of:	
	Assets	Pretax Earnings	After-tax Earnings	Dividends	Interest, Rent, Royalties	Subpart F	CFCs	Parents
Dividends and interest, rents, royalties > 0:								
Excess credit; Subpart F = 0	18.6	1.9	1.0	1.4	0.33	0	302	73
	(.35)	(.25)	(.23)	(.38)	(.17)	(0)	(.42)	(.37)
Excess credit; Subpart F > 0	6.7	.2	.05	.2	.044	.103	25	12
	(.12)	(.02)	(.01)	(.05)	(.02)	(.33)	(.04)	(.06)
Deficit credit; Subpart F = 0	25.8	5.1	2.9	1.9	1.46	0	373	104
	(.48)	(.66)	(.67)	(.52)	(.76)	(0)	(.52)	(.53)
Deficit credit; Subpart F > 0	2.4	.5	.4	.2	.08	.208	13	9
	(.04)	(.06)	(.05)	(.05)	(.04)	(.67)	(.02)	(.04)
Dividends > 0; interest, rents, royalties = 0:								
Excess credit; Subpart F = 0	23.1	5.5	3.5	2.9	0	0	439	89
	(.45)	(.54)	(.53)	(.53)		(0)	(.41)	(.33)
Excess credit; Subpart F > 0	4.1	.7	.5	.7	0	.26	75	23
	(.08)	(.07)	(.08)	(.13)		(.76)	(.07)	(.08)
Deficit credit; Subpart F = 0	22.5	3.8	2.4	1.6	0	0	508	133
	(.44)	(.37)	(.37)	(.29)		(0)	(.48)	(.49)
Deficit credit; Subpart F > 0	1.5	.18	.15	.3	0	.08	36	27
	(.03)	(.02)	(.02)	(.05)		(.24)	(.03)	(.10)

(continued)

Table 5.12 (continued)

	Billions of Dollars						Number of:	
	Assets	Pretax Earnings	After-tax Earnings	Dividends	Interest, Rent, Royalties	Subpart F	CFCs	Parents
Dividends = 0; interest, rents, royalties > 0:								
Excess credit; Subpart F = 0	28.1	4.5	1.8	0	.54	0	543	87
	(.40)	(.57)	(.51)		(.27)	(0)	(.32)	(.27)
Excess credit; Subpart F > 0	1.9	.17	.12	0	.58	.09	28	17
	(.03)	(.02)	(.03)		(.03)	(.22)	(.02)	(.05)
Deficit credit; Subpart F = 0	35.9	2.6	1.2	0	1.3	0	1,086	182
	(.51)	(.33)	(.34)		(.65)	(0)	(.64)	(.56)
Deficit credit; Subpart F > 0	4.3	.59	.41	0	.11	.32	48	40
	(.06)	(.08)	(.12)		(.05)	(.78)	(.03)	(.12)
Dividends and Interest, Rents, Royalties = 0:								
Excess credit; Subpart F = 0	52.8	7.8	3.4	0	0	0	2,963	134
	(.45)	(.62)	(.53)			(0)	(.41)	(.25)
Excess credit; Subpart F > 0	5.5	.72	.36	0	0	.21	139	46
	(.05)	(.06)	(.06)			(.40)	(.02)	(.09)
Deficit credit; Subpart F = 0,	53.8	3.6	2.2	0	0	0	3,890	270
	(.46)	(.28)	(.34)			(0)	(.54)	(.51)
Deficit credit; Subpart F > 0	4.6	.52	.44	0	0	.31	156	80
	(.04)	(.04)	(.07)			(.60)	(.02)	(.15)

Source: Authors' tabulations based on U.S. Treasury data described in the text.

Note: Figures in parentheses are percentages of column totals.

Table 5.13 **Foreign Tax Rates of CFCs Paying Dividends to Parents with Deficit Foreign Tax Credits, 1984**

All Industries	Assets	Earnings and Profits	Earnings and Profits After Tax	Dividends	Interest, Rents, Royalties	Subpart F	Number of CFCS
Payout less than current earnings and profits after tax:							
Total	57,264	9,424	6,299	2,247	1,474	792	794
Foreign tax rate:							
≤20%	24,074	2,594	2,465	389	205	682	284
20–30%	4,093	596	439	101	27	40	82
30–40%	9,951	1,915	1,199	395	362	52	115
40–40%	8,818	2,436	1,362	806	245	7187	
50–60%	7,824	1,538	727	519	517	1	89
>60%	2,502	346	105	43	62	11	37
Payout more than current earnings and profits after tax:							
Total	31,828	2,994	1,942	2,187	264	1,145	645
Foreign tax rate:							
≤20%	18,861	1,155	1,070	1,020	57	897	342
20–30%	3,101	198	144	64	23	121	42
30–40%	1,238	152	99	167	18	7	55
40–50%	2,145	282	151	215	72	37	75
50–60%	2,748	766	365	462	54	8	51
>60%	3,735	440	111	257	38	74	80

Note: Figures are in millions of dollars. Details may not add to totals due to rounding.

Table 5.14 **Tobit Model of CFC Dividend Distributions**

	Dependent Variable			
Independent Variable	Dividends/Assets		Dividends + Subpart F/Assets	
Constant	−14.6359	−15.7046	−10.2714	−10.8799
	(.4511)	(.3070)	(.3268)	(.2204)
TAX	−.0155	−.0145	−.0101	−.0097
	(.0997)	(.0100)	(.0076)	(.0076
X	1.0229	1.1961	.6281	.8568
	(.3727)	(.3536)	(.2667)	(.2551)
Earnings/assets	.1088	.1145	.0967	.0988
	(.0405)	(.0395)	(.0297)	(.0294)
TAX* (earnings/assets)	−.1606	−.1707	−.1318	−.1367
	(.0943)	(.0924)	(.0697)	(.0692)
Parent dividends/parent assets	34.1940	43.4463	26.2514	31.5056
	(6.1868)	(5.9001)	(4.4807)	(4.3105)
Industry dummies	Present	None	Present	None
Log likelihood	−8,452.2	−8,502.7	−9,437.5	−9,459.7
Percentage with payout	16.7	16.7	20.2	20.2
Number of observations	10,606	10,606	10,606	10,606

Note: Standard errors are in parentheses.

Notes

1. Controlled foreign corporations also made sizable repatriations out of their pre-foreign-tax income in the form of interest, rent, and royalties paid to their American parents. These data are reported in Goodspeed and Frisch (1989).

2. This list includes France, Belgium, the Netherlands, and Norway; others such as Switzerland and West Germany have complicated systems that are hybrids of territorial and residence systems.

3. For somewhat more detail on the foreign tax credit mechanism and recent changes therein, see Ault and Bradford (in this volume); for more comprehensive treatment of earlier law, see McDaniel and Ault (1981). In order to be eligible for the credit, firms must own at least 10 percent of a foreign affiliate, and only those taxes that qualify as income taxes are creditable. Further, there are some complications in the calculation of deemed-paid credits that are important to the results presented in sec. 5.3

4. This feature may be more important in an international setting since exchange rate variability can create substantial changes in dollar-denominated capital values. For a critical analysis of recent legislative changes in the U.S. taxation of income and capital values affected by foreign exchange movements, see Wahl (1987).

5. The nomenclature is somewhat detailed. All foreign operations take place through affiliates; those that are separately incorporated are subsidiaries. Majority ownership is sometimes very important from a legal, economic, and data-reporting standpoint; much of the U.S. Department of Commerce data on foreign operations of U.S. multinationals is reported for majority-owned foreign affiliates, without dis-

tinguishing branches from subsidiaries. Controlled foreign corporations are the subset of subsidiaries that meet the ownership requirements described in the text; they need not be (but usually are) majority owned by a single parent.

6. It seems reasonable here to assume that there are no fundamental (i.e., not related to taxes) differences between debt and equity contracts, so long as the parent is the sole owner of either claim. Caves (1982) discusses evidence on this point.

7. For a concise survey of OECD withholding rates on various types of remittances, see Alworth (1988, chap. 4). All are well below statutory tax rates. See also various issues of Price Waterhouse's *Corporate Taxes*.

8. For further elaboration of this model, see also Poterba and Summers (1985) and Poterba (1987).

9. Tax-minimizing multinationals have incentives to raise the (recorded) prices of goods sold by affiliates in low-tax jurisdictions to other affiliates in higher-tax jurisdictions. Properly used, transfer pricing can repatriate profits from high-tax foreign countries while generating tax deductions in those countries. Naturally, U.S. and foreign tax authorities discourage tax-minimizing transfer price manipulations and have adopted regulations to deter firms from engaging in them. For the purposes of this paper, we will assume that those rules are binding and that transfer pricing cannot be used for tax avoidance in repatriations. For evidence that transfer prices are sensitive to tax considerations, see Wheeler (1988) and Grubert and Mutti (1989); for contrary evidence, see Bernard and Weiner (in this volume). Of course, in a wide class of circumstances, it is difficult even to know what constitute appropriate transfer prices for goods traded within multinational corporations; Hines (1988a) suggests an approach to this problem.

10. Foreign subsidiaries of multinational firms are unable to use other devices commonly employed by domestic firms to distribute earnings to shareholders without creating a dividend tax liability. For example, share repurchases and liquidating distributions by foreign subsidiaries are treated for tax purposes as if they were dividends.

11. Detailed reviews of tax-minimizing patterns of intrafirm financial transactions in multinationals can be found in Alworth (1988) and Scholes and Wolfson (1988). Scholes and Wolfson consider as well the effects of U.S. taxation on the decision of foreign multinationals to acquire U.S. firms.

12. Even in the case of a domestic firm, signaling models must confront the empirical regularity (in U.S. data) that large, mature firms have high payout rates while small, growing firms (with presumably the greatest need to signal) have very low or zero payout rates (see Fazzari, Hubbard, and Petersen 1988).

13. Agency cost motivations for dividend distributions are considered by Jensen (1986) and Hubbard and Reiss (1988).

14. Some caution must be exercised in interpreting such results. Kopits uses pooled cross-sectional/time-series data on subsidiaries in different countries in 1961 and 1962. Since fixed country effects were not included, we cannot separate co-movements among variables reflecting persistent differences across countries (e.g., in the mix of industries of the constituent subsidiaries) from true within-group variation. Horst (1972) notes that certain (two-digit) industry groups are more likely to invest abroad, so that analyses of payout ratios by country without information on industry composition or comparison of payout ratios of subsidiaries (as a whole) with U.S. firms (as a whole) may not be informative.

15. The period before 1962 remains something of a black box to the tax analyst. The tax system was quite different before 1962, but the reason that we do not include those years in our analysis is that tax data on multinational financial behavior are neither consistently nor comprehensively available for any of those years.

16. The payout ratios reported in Poterba (1987) do not incorporate foreign earnings and retentions of American multinationals, making the comparison somewhat strained. However, adjusted payout ratios reported in Hines (1988b) do not differ greatly from those in Poterba (1987).

17. Data on Subpart F income are available for years prior to 1968 but are not reported in table 5.8. The years before 1968 are very similar to 1968 and 1972 in that Subpart F income is trivial relative to actual dividend distributions.

18. One hesitates to construct a series of such numbers in part because some of the repatriations designated as dividends in the data may represent income that was previously (or possibly even currently) deemed distributed as Subpart F. Hence, there is the possibility of double counting that income. Figures for dividend payments to American parents and their domestic subsidiaries are taken from Form 5471 and its predecessor Form 2952; these forms instruct the taxpayer not to include as dividends the deemed distributions under Subpart F. But it is somewhat ambiguous whether to include as a current-year dividend the current distributions of Subpart F income of prior years. Because Subpart F income is stacked first in the payout inventory rules, this may not be a major problem. And, since firms have little incentive to overstate their dividends on Form 5741, we follow the Treasury in treating dividends and Subpart F income separately.

19. The growth of petroleum firms after 1974 may be responsible for the anomalously low petroleum industry earnings in 1976. Since oil companies can expense for tax purposes part of their exploration and development costs, taxable earnings are likely to be low in a period of rapid growth. This observation should reinforce one's caution in drawing conclusions from simple cross sections of taxable income and tax rates.

20. Certain types of income are kept in separate "baskets" to prevent just such pooling. The Tax Reform Act of 1986 strengthened the functional separation of various income types (see also Ault and Bradford, in this volume). In addition, the creditability of foreign taxes on petroleum income has since 1975 been subject to various limits.

21. This sample is a subset of the sample collected by the Statistics of Income Division of the Internal Revenue Service on the same basis as that used to construct the aggregate statistics described in sec. 5.2. Strictly speaking, the universe for this sample is large U.S. multinationals reporting on their tax forms that they have controlled foreign corporations in 1984. The data of course cannot include corporations that fail to file their tax forms, and there is some evidence that tax noncompliance is a particularly serious problem for corporations earning income in offshore tax havens (see Rice 1989). But the questionable income of this group seems unlikely to be quantitatively significant compared to the corporations we include.

22. Goodspeed and Frisch (1989) analyze data from a larger sample of CFCs in 1984, one that was not restricted in the same way as ours. The CFCs in their sample had after-foreign-tax earnings of $30 billion, while ours had $24 billion; their CFCs paid $11.8 billion in dividends, ours $10.1 billion.

23. We add interest, rent, and royalty payments together in the subsequent analysis because they represent repatriation methods that (usually) share the feature of tax deductibility in CFCs' host countries. We do not claim that they are identical; in particular, the three types of payments are often subject to different withholding tax rates by foreign governments, and their levels may be restricted in different ways. Our focus in any case is on dividend payments; we presume firms to have less year-to-year discretion over interest, rent, and royalty payments than they do over dividend distributions.

24. A potential complication arises in interpreting these data since, prior to the enactment of the Tax Reform Act of 1986, firms were allowed for tax purposes to

treat dividends paid in the first sixty days of their annual accounting period as paid during the previous year. This rule, enacted to permit firms with complicated foreign tax situations the opportunity to calculate their foreign tax obligations before selecting their repatriation strategies for the year, makes it almost impossible for us to know the tax consequences of a year's dividend payouts since firms are not required to indicate on their tax forms to which year dividends paid in the first sixty days are attributed. This problem has not been previously addressed, though it applies to all the published U.S. aggregate data and to all the micro data of which we are aware; the aggregate numbers reported in *Statistics of Income* publications represent dividends paid at any time during the tax year. As it happens, this problem is not quantitatively significant (at least in 1984) since of $9.15 billion paid in dividends (outside FIRE industries) only $1.15 billion were reported to have been paid during the first sixty days.

25. It is interesting to note in table 5.13 that the pretax rate of return (on assets) generally rises with the tax rate, as one would expect. It declines sharply, however, for firms with the highest foreign tax rates, perhaps implying judicious use of transfer pricing to lower reported earnings in such jurisdictions. We are grateful to Mark Wolfson for this observation.

26. There are other reasonable candidates for variables with which to deflate D and E in (3) and subsequently; our discussant Mark Wolfson suggested stockholder's equity rather than total assets. Our choices are, however, tightly constrained by limited data: total CFC assets is the only reliable stock variable we could extract from the tax forms.

27. In our empirical work, we use .46 for τ and the average foreign tax rate of the CFC for τ^*. Since none of the American parents in our sample had domestic tax losses that year and all are large corporations, .46 is a very close approximation of their marginal U.S. corporate tax rates. The average foreign tax rate is the best that one can do for τ^*; without panel data, it is impossible to know exactly the indirectly creditable foreign tax rate on dividends that exceed current-year earnings and profits. Two additional features of foreign tax systems are not included in the tax prices we use. One is that we ignore foreign withholding taxes on dividends. These taxes represent net costs when American parents have excess foreign tax credits. The other is that some countries like West Germany employ split-rate corporate tax systems that tax distributed profits differently (less heavily, in the German case) than reinvested profits. Variations in withholding taxes and corporate tax systems are unlikely to be important enough to change the results reported in table 3.14, but we are currently investigating those effects.

28. This is not fully satisfactory, of course, since excess credits can be carried forward. That is, there is an opportunity cost of suing excess credits in a given period and a potential benefit from generating additional excess credits. These costs and benefits depend on the discount rate and the probability of transiting to a deficit credit state (itself endogenous). Absent longitudinal data on the parent's tax status and foreign income, there is little scope for incorporating this consideration.

29. To the extent that our results are biased, one would expect the estimated tax price effect to be understated.

30. The industries are mining, construction, transportation, trade, services, and the following manufacturing industries: food, chemicals, nonelectrical machinery, electronic equipment, and motor vehicles; the excluded category is other manufacturing industries.

31. This equation is estimated only for non-FIRE CFCs, in order to avoid the potential problem that the dividend payments of a manufacturing CFC to a holding company that owns it would be double counted as income.

32. Modifying these provisions for the taxation of multinationals (say, by removing "deferral" and taxing earnings directly) is difficult within the framework

of the corporate income tax because some attempt would have to be made to measure "profits" of the CFC. One alternative would be to adopt a variant of a corporate "cash flow" tax, which would tax the difference between net revenues and investment expenditures. In such a system, there is no argument for crediting foreign taxes paid; because investment is expensed, the U.S. Treasury is a partner in the firm's equity. Absent the credit, the U.S. parent would get its share (one minus the corporate-cash-flow tax rate) of the net-of-foreign-tax returns from investing. The removal of deferral and the credit system removes much of the incentive to use financial transactions to time tax payments.

33. This is significant, of course, only to the extent that other countries do not follow suit in reducing their statutory tax rates.

References

Adler, Michael. 1979. U.S. taxation of U.S. multinationals: A manual of computation techniques and managerial decision rules. In *International finance and trade*, ed. M. Salant and G. Szego, 2:157–210. Cambridge, Mass.: Ballinger.

Alsegg, R. J. 1971. *Control relationships between American corporations and their European subsidiaries*. Research Study no. 107. New York: American Management Association.

Alworth, Julian. 1988. *The finance investment and taxation decisions of multinationals*. Oxford: Blackwell.

Auerbach, Alan J. 1979. Wealth maximization and the cost of capital. *Quarterly Journal of Economics* 93:433–46.

Barlow, E. R., and J. T. Wender. 1955. *Foreign investment and taxation*. Englewood Cliffs, N.J.: Prentice-Hall.

Bhattacharya, Sudipto. 1979. Imperfect information, dividend policy, and the "bird in the hand" fallacy. *Bell Journal of Economics* 10:259–70.

Boskin, Michael J., and William G. Gale. 1987. New results on the effects of tax policy on the international location of investment. In *The effects of taxation on capital accumulation*, ed. M. S. Feldstein, 201–19. Chicago: University of Chicago Press.

Bradford, David F. 1981. The incidence and allocation effects of a tax on corporate distributions. *Journal of Public Economics* 15:1–22.

Brooke, M. Z., and H. L. Remmers. 1970. *The strategy of multinational enterprise: Organization and finance*. New York: Elsevier.

Burns, J. O. 1980. Transfer pricing decisions in U.S. multinational corporations. *Journal of International Business Studies* 11:23–29.

Caves, Richard E. 1982. *Multinational enterprise and economic analysis*. Cambridge: Cambridge University Press.

Fazzari, Steven M., R. Glenn Hubbard, and Bruce C. Petersen. 1988. Financing constraints and corporate investment. *Brookings Papers on Economic Activity* 1:141–95.

Gertler, Mark L., and R. Glenn Hubbard. 1988. Financial factors in business fluctuations. In *Financial market volatility: Causes, consequences, and policy responses*. Kansas City: Federal Reserve Bank of Kansas City.

Goodspeed, Timothy J., and Daniel J. Frisch. 1989. U.S. tax policy and the overseas activities of U.S. multinational corporations: A quantitative assessment. Washington, D.C.: U.S. Department of the Treasury. Mimeo.

Greene, J., and M. G. Duerr. 1970. *Intercompany transactions in the multinational firm: A survey.* Managing International Business no. 6. New York: Conference Board.

Grubert, Harry, and John Mutti. 1989. Taxes, tariffs and transfer pricing in multinational corporation decision-making. U.S. Department of the Treasury. Mineo.

Hartman, David. 1981. Domestic tax policy and foreign investment: Some evidence. NBER Working Paper no. 784. Cambridge, Mass.: National Bureau of Economic Research, October.

_____. 1985. Tax policy and foreign direct investment. *Journal of Public Economics* 26:107–21.

Hines, James R., Jr. 1988a. Multinational transfer pricing and its tax consequences: Where the profits are. Princeton University. Mimeo.

_____. 1988b. Taxation and U.S. multinational investment. In *Tax policy and the economy,* ed. L. H. Summers, 2:33–61. Cambridge, Mass.: MIT Press and the National Bureau of Economic Research.

Horst, Thomas. 1972. Firm and industry determinants of the decision to invest abroad: an empirical study. *Review of Economics and Statistics* 54:258–66.

_____. 1977. American taxation of multinational firms. *American Economic Review* 67:376–89.

Hubbard, R. Glenn, and Peter C. Reiss. 1988. Corporate payouts and agency problems: Evidence from the undistributed profits tax of 1936–1938. Columbia University. Mimeo.

Jensen, Michael C. 1986. Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review* 76:323–29.

Jun, Joosung. 1987. Taxation, international investment, and financing sources. Harvard University. Mimeo.

King, Mervyn A. 1977. *Public policy and the corporation.* London: Chapman & Hall.

Kopits, George F. 1972. Dividend remittance behavior within the international firm: A cross-country analysis. *Review of Economics and Statistics* 54:339–42.

_____. 1976. Intra-firm royalties crossing frontiers and transfer-pricing behaviour. *Economic Journal* 86:791–805.

Lintner, John V. 1956. Distribution of income of corporations among dividends, retained earnings, and taxes. *American Economic Review* 46:97–113.

McDaniel, Paul R., and Hugh J. Ault. 1981. *Introduction to United States international taxation.* Deventer, The Netherlands: Kluwer.

Mauer, L. J., and A. Scaperlanda. 1972. Remittances from U.S. direct foreign investment in the European Economic Community: An exploratory estimate of their determinants. *Economia Internazionale* 25:33–43.

Mutti, John. 1981. Tax incentives and repatriation decisions of U.S. multinational corporations." *National Tax Journal* 34:241–48.

Newlon, Timothy Scott. 1987. Tax policy and the multinational firm's financial policy and investment decisions." Ph.D. diss., Princeton University.

Poterba, James M. 1987. Tax policy and corporate saving. *Brookings Papers on Economic Activity* 2:455–503.

Poterba, James M., and Lawrence H. Summers. 1985. The economic effects of dividend taxation. In *Recent advances in corporate finance,* ed. E. I. Altman and M. G. Subrahmanyam. Homewood, Ill.: Irwin.

Price Waterhouse. *Corporate taxes—a worldwide summary* (various annual editions and individual country guides). New York: Price Waterhouse.

Rice, Eric M. 1989. The corporate tax gap: Evidence on tax compliance by small corporations. Harvard University. Mimeo.

Robbins, S. M., and R. B. Stobaugh. 1973. *Money in the multinational enterprise: A study of financial policy.* New York: Basic.

Scholes, Myron S., and Mark A. Wolfson. 1988. The effects of changes in tax laws on corporate reorganization activity. Stanford University. Mimeo.

Severn, A. K. 1972. Investment and financial behavior of American direct investors in manufacturing. In *The international mobility and movement of capital,* ed. F. Machlup, W. S. Salant, and L. Tarshis. New York: Columbia University Press for the National Bureau of Economic Research.

Skelly, Daniel F., and James R. Hobbs. 1986. Statistics of income studies of international income and taxes. *SOI Bulletin* 6:1–19.

Stevens, G. V. G., 1969. Fixed investment expenditures of foreign manufacturing affiliates of United States firms: Theoretical models and empirical evidence. *Yale Economic Essays* 9:137–206.

_____. 1972. Capital mobility and the international firm. In *The international mobility and movement of capital,* ed. F. Machlup, W. S. Salant, and L. Tarshis. New York: Columbia University Press for the National Bureau of Economic Research.

Stopford, J. M., and L. T. Wells, Jr. 1972. *Managing the multinational enterprise: Organization of the firm and ownership of the subsidiaries.* New York: Basic.

Tang, R. Y. W. 1979. *Transfer pricing practices in the United States and Japan.* New York: Praeger.

Wahl, Jenny Bourne. 1987. Taxation of foreign exchange gains and losses. OTA Working Paper 57. Washington, D.C.: U.S. Department of the Treasury, October.

Wheeler, James E. 1988. An academic look at transfer pricing in a global economy. *Tax notes* (4 July), 87–96.

Zenoff, D. B. 1966. The determinants of dividend remittance practices of wholly owned European and Canadian subsidiaries of American multinational corporations. D.B.A. thesis, Graduate School of Business Administration, Harvard University.

Comment

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I enjoyed this paper very much, particularly the analysis of the micro data for 1984. The exercise serves to remind us just how much richness can be lost when our inferences about economic behavior are necessarily restricted to economic aggregates.

Hines and Hubbard (hereafter HH) partition the data in particularly informative ways. Like all good descriptive work, the analysis raises as many questions as it answers. And one of the nice things about working with micro data is that the questions raised might actually be answerable. Whereas parsimony in modeling is especially virtuous when the available data afford few degrees of freedom (the typical situation when macro data

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are used), there are returns to more sophisticated modeling when micro data are available, particularly when they offer thousands of degrees of freedom. Before providing some examples of what I have in mind here, let me first make a few more general remarks about the paper.

The claim that there exists a dividend puzzle would seem to be a bit of a red herring in a multinational context in the presence of a foreign tax credit system. So is the fact that the U.S. Treasury appears to collect no corporate-level tax on the profits earned abroad by U.S. multinationals.

Unlike in the domestic context, where a current dividend gives rise to the collection of current tax revenues by the U.S. Treasury, a dividend paid to a U.S. multinational by a profitable subsidiary operating in a country with a tax rate similar to that in the United States will, to a first approximation, yield no current revenues to the U.S. Treasury by design. So we need not resort to a "trapped equity" calculus to remind us that the cost of a current dividend to the declaring firm is less than the immediate tax cost because, to a first approximation, there is not an immediate tax cost, let alone a future one. Indeed, the most interesting aspect of the paper is that U.S. multinational firms appear to be so careful in tax planning that they leave clearly identifiable audit trails that document their attempts to contain even the second-order effects of multinational tax rules on their tax liabilities.

Having said this, it is nevertheless misleading to state that the U.S. Treasury collects no revenues on the foreign profits earned by U.S. multinationals. A component of taxes that HH (and others in this literature) have forgotten is the shareholder-level tax. As U.S. multinationals generate profits abroad, share prices increase, and the resulting increase in domestic dividends and capital gains give rise to U.S. tax revenues. This source of tax revenue may well increase following passage of the Tax Reform Act of 1986 because the reduction in the capital gains tax break increases shareholder-level taxes.

Prior to presenting their data, HH attempt to lay out a framework for understanding (1) the incentives to repatriate foreign earnings in alternative forms (by means of dividends, interest, rent, royalties, transfer pricing, and Subpart F rules) and (2) the incentives to repatriate foreign earnings, rather than to reinvest them locally, as a function of tax rates and foreign tax credit limitation status.

As an aside here, another dimension that they might have considered is the importance of alternative routes (from one controlled foreign corporation to another in different tax jurisdictions) through which repatriations can travel to maximize after-tax repatriations. Some of the accounting firms have developed elaborate software to do just this. Price Waterhouse, for example, has a package that considers up to one hundred routes and allows as many as four intermediate countries to repatriate.

In my remaining comments, I would like to embellish the HH framework somewhat. I will close with some remarks about their data analysis. To

begin, HH develop the conventional wisdom that the deferral of U.S. tax on foreign subsidiary earnings of U.S. multinationals provides an incentive for the subsidiaries to postpone the payment of dividends to their U.S. parents. This is basically correct in a wide variety of circumstances, but not in all situations.

For example, HH interpret Jun's evidence (that a significant fraction of multinationals simultaneously receive dividends from their foreign subsidiaries as well as make new capital infusions) as being inconsistent with tax minimization. But in fact the payment of dividends can be a tax-saving strategy in a number of important situations. I will briefly list three cases here.

First, it pays to repatriate, particularly from low-tax countries, when the parent's marginal U.S. tax rate is temporarily low. This may be the result of net operating losses for the parent; the add-on minimum tax prior to 1986, which dropped marginal tax rates from 46 to 39.1 percent; the alternative minimum tax; or investment tax credit carryforwards.[1] With a little calculating, table 5.6 of the paper can be seen as providing evidence consistent with an incentive to repatriate when the parent generates net operating losses. Dividends paid to the U.S. by foreign subsidiaries in 1982 were roughly the same as in 1980 despite a 25 percent reduction in foreign subsidiary earnings. And many firms faced net operating losses in 1982, as we know from the work of Auerbach and Poterba, among others, so firms apparently seized this opportunity to repatriate (see Auerbach and Poterba 1987, 304–42).

A second situation in which it may pay to accelerate dividend payments is when a firm's excess foreign tax credits are about to expire unused. In such a circumstance, it may pay to repatriate profits from a low-tax foreign subsidiary to use up the credits, especially if such profits would eventually be repatriated anyway. This ensures that the low-tax subsidiary profits will escape a repatriation tax. Note that it can be optimal to repatriate from the low-tax country and turn around and make new capital infusions in the same firm, all purely for tax reasons.

As a third example, if repatriation occurs from a low-tax foreign subsidiary for nontax reasons (such as the existence of poor investment opportunities), repatriations from a high-tax country can actually give rise to a net tax refund from the U.S. Treasury. That is, any firm in a deficit foreign tax credit position, repatriating from a country where the tax rate exceeds that in the United States, will receive a foreign tax credit exceeding the U.S. tax on the repatriated dividend.

Related to this last point, let me turn next to the question of the "tax price" of repatriation. HH argue that the tax price of a repatriation when a firm is in an excess foreign tax credit position is zero (or possibly positive if a withholding tax must be incurred to effect the repatriation). This observation is reflected in the design of their Tobit model. But this claim

ignores the possibility that excess foreign tax credits, which can be carried forward for five years, might actually get used to offset U.S. tax in the future. Setting the tax price of a dividend repatriation to zero for an excess foreign tax credit firm is akin to arguing that the marginal tax rate of a firm that generates net operating losses is 0 percent, and this can be far from correct. A firm with an excess of foreign tax credits naturally becomes attracted to those investments in low-tax countries for which repatriation of profits is desirable for nontax reasons within a short period of time. Such considerations can make the tax price of repatriation negative even where excess foreign tax credits exist.

Another way to use up excess foreign tax credits not mentioned in the paper is to generate export sales from the United States rather than through a foreign subsidiary, branch, or even a so-called foreign sales corporation. In appropriate circumstances, this permits half the profit on the sale to be allocated to "foreign-source income," thereby allowing, in most cases, an additional foreign tax credit to be taken against U.S. tax liability equal to the U.S. tax rate on half the profit.[2]

A further complication that arises here is that a firm may face an excess foreign tax credit for one income basket but a deficit foreign tax credit for another. In this case, the tax price of repatriation can be positive for a firm reporting excess foreign tax credits.

Trapped Equity

As suggested earlier, I was a bit puzzled by the prominence given the trapped equity ideas in this paper. The trapped equity argument applies when retained earnings are trapped in the corporation and cannot be distributed in any other way than by dividends. Yet a major theme of the paper is alternatives to dividends as a way to deliver retained earnings to the parent. There is one sense, though, in which the trapped equity argument does apply more naturally to the multinational setting than to the domestic one. Shoven's evidence on share repurchases as a tax-favored way of distributing profits to shareholders is sufficient to cast serious doubt on the importance of the trapped equity argument in the United States. In the multinational context, however, share repurchases and liquidations give rise to dividend treatment to the extent of earnings and profits generated since 1962. As a related matter, such transactions (i.e., share repurchases and liquidations) should be counted as dividends for the purposes of the HH study, but I do not believe that they were.

Analysis of the Micro Data

Let me turn next to what I find to be the most interesting part in the paper: the micro data for 1984 presented in tables 5.10–5.14. First, consider table 5.10. Let me begin with a minor quibble. HH indicate that, for firms paying interest, rent, or royalties, but no dividends, to their parents, the amount

distributed was 65 percent of after-tax earnings. While this is true, it can be misleading. Interest, rent, and royalties represent a distribution of pretax earnings. Their payment triggers tax in the United States. More meaningfully, these payments represented less than 25 percent of taxable income before interest, rent, and royalties.

Now I will turn to more important matters. Although not calculated directly in table 5.10, it is interesting to compare the average foreign tax rate paid for firms that paid dividends but not interest, rent, or royalties (34 percent) to those that paid interest, rent, or royalties but not dividends (51 percent). For the most part, the benefits of tax deferral exist only in low-tax foreign subsidiary jurisdictions, as HH correctly point out. This, in turn, has implications for the optimal capital structure of foreign subsidiaries.

Because dividends can be delayed for many years but interest on debt, rent on lease contracts, and royalties on licensing agreements cannot be, equity financing is desirable in low-tax environments.[3] Similarly, in high-tax environments, distributions from pretax income in a form that is deductible locally are tax preferred, so debt, leases, and licenses are desirable financing arrangements, although these benefits must be traded off against the cost of precommitment to the timing of repatriation that is not present with dividends. Because of this, capital structure may well differ systematically across foreign subsidiaries as a function of their tax rates.

In the Tobit model run by HH, this possibility is not considered. Their dependent variable is dividends divided by total assets. The arguments I have just made, however, suggest that the ability to explain cross-sectional variation in dividends as a function of the "tax price" of paying them might be improved if dividends were deflated by stockholders' equity rather than total assets to control for capital structure differences. Despite this, their results in table 5.14 fare pretty well on this score.

One final comment about the results in table 5.10 is in order. In interpreting the finding that 84 percent of foreign subsidiaries paid no dividends in 1984, HH note that most controlled foreign corporations appear to generate no U.S. tax liability on their income each year. But, given an average foreign tax rate of nearly 43 percent (and this is before withholding taxes on dividends), repatriations would hardly raise any U.S. tax anyway.

I will skip over table 5.11 other than to mention in passing that it constitutes good detective work to deal with the possible problem of foreign holding companies polluting the results. Moving on to table 5.12, we see that firms with deficit foreign tax credits account for 63 percent of interest, rent, and royalty repatriations. HH claim that this is consistent with tax-minimizing behavior, but I cannot see why. Such repatriations are neutral relative to dividends for deficit foreign tax credit firms. Both can be shown to have a tax price equal to that given in equation (1) of the paper. On the other hand, both are inferior to passive investment that generates Subpart F income.

As to passive income, table 5.12 also reveals that deficit foreign tax credit firms account for a disproportionate share of Subpart F income (58 vs. only 52 percent of total assets). This is consistent with what HH expected to see, but what I find striking is that such a high proportion of Subpart F income is accounted for by excess foreign tax credit firms.

This points to a possible tax motivation for investing in Subpart F income that is not recognized in the paper. Firms with excess foreign tax credits and without good active investment opportunities might wish to postpone repatriations until they can average the large foreign tax credits with income from lower-tax-rate controlled foreign corporations. Another possibility is that, until the Tax Reform Act of 1986, the definition of earnings and profits differed for ordinary dividends and for Subpart F income. Since dividends are taxable only to the extent of earnings and profits, repatriation by way of Subpart F income can be preferred if it results in a larger nontaxable return of capital than does a dividend repatriation.

But table 5.12 reveals much more. With some calculating, one can see that deficit foreign tax credit firms reporting Subpart F income generate an amount of Subpart F income equal to 7.15 percent of total assets. This suggests that a significant fraction of total assets (probably well in excess of half) is invested passively. By contrast, excess foreign tax credit firms reporting Subpart F income generate total Subpart F income equal to only 3.64 percent of total assets, suggesting a percentage investment in Subpart F assets of perhaps half as much. Note that Subpart F investment for deficit foreign tax credit firms is more desirable the lower is the average tax rate of the foreign subsidiary. In this regard, some calculating from table 5.12 reveals that the average tax rate of the deficit foreign tax credit firms reporting Subpart F income is 21.8 percent, whereas those reporting no Subpart F income pay average tax rates of 42.4 percent or nearly twice as much in 1984. At this high rate, deferral is not particularly valuable. Table 5.13 demonstrates this point even more vividly.

Table 5.13 is interesting for another reason that is not discussed in the paper. It may be stretching things some, but table 5.13 can be interpreted as providing evidence that transfer pricing is being used to repatriate profits for controlled foreign corporations that face the highest tax rates. One would expect competition to result in pretax rates of return on investment to be increasing in the level of tax rates across tax jurisdictions.[4] Table 5.13 shows this to be the case except for the firms facing the highest tax rates.

It would be interesting to compare the pretax return on asset numbers in table 5.13 with analogous numbers for excess foreign tax credit firms. Table 5.13 reports data for deficit foreign tax credit firms only. The excess foreign tax credit firms have an even greater incentive to shift income via transfer pricing, so it would be interesting to see whether the positive relation between tax rates and pretax investment rates of return turns negative for these firms at lower average tax rates.

Finally, I will comment briefly on the Tobit model of dividends reported in table 5.14. I like the results here, but a few qualifications are in order. I have already expressed my major experimental design regret, that the model does not control for expected capital structure differences across the subsidiaries. It also does not consider withholding taxes, although this is acknowledged by HH. In addition, the model takes as exogenous factors that are clearly endogenous, although the authors are well aware of this as well.

Although the result that dividends are higher where there is an excess foreign tax credit is sensible (and is consistent with my earlier argument that the tax cost of a repatriation can be negative in a present value sense if foreign tax credits can be carried forward and used to offset U.S. taxes in the future), it is also partially induced by construction. If dividends were the only means to effect repatriation, a necessary condition for generating an excess foreign tax credit would be to pay a dividend.

Finally, table 5.14 considers two dependent variables: dividends divided by total assets and dividends plus Subpart F income divided by total assets. HH claim that the results are similar across the two dependent variable specifications, suggesting that Subpart F income responds similarly to dividend income with respect to the independent variables in the model. But this seems inconsistent with what was shown in tables 5.12 and 5.13. Indeed, on closer inspection, there is no inconsistency: Subpart F income does *not* seem to behave similarly to dividend income. In fact, the estimated coefficient on the foreign tax credit dummy drops 40 percent when Subpart F income is included in the dependent variable despite the fact that Subpart F income is less than 20 percent of dividends. And this makes sense: Subpart F income is desirable the *lower* the tax rate and hence the less likely it is that excess foreign tax credits are present. Similarly, the coefficient on the tax cost variable declines by one-third, which is consistent with the earlier finding that Subpart F income is the preferred repatriation method when tax rates are lower abroad.

To conclude, Hines and Hubbard are to be greatly commended for a fine piece of work. They have provided the best analysis of microdata in the multinational area that I have seen. Their effort deserves to be widely read, for it should stimulate much though on how taxes affect the flow of capital in an increasingly global economy.

Notes

1. The presence of investment tax credit (ITC) carryforwards affects the marginal tax rate since the ability to utilize ITCs is tied directly to the regular tax. Each dollar of regular tax frees up some ITC carryforward.

2. On the other hand, up to 25 percent of the profits from sales through a "foreign sales corporation" may also give rise to "foreign-source income."

3. Two caveats are in order here. First, withholding tax rates often differ among the repatriation alternatives, and this can affect the optional capital structure. Second,

unlike equity financing, debt financing allows the possibility of repatriating principal without triggering a tax even when foreign "earnings and profits" are positive.

4. For further elaboration of this point, see Scholes and Wolfson (in press).

References

Auerbach, Alan J., and James M. Poterba. 1987. Tax loss carryforwards and corporate tax incentives. In *The effects of taxation on capital accumulation*, ed. Martin Feldstein. (Chicago: University of Chicago Press).

Scholes, Myron S., and Mark A. Wolfson. In press. *Taxes and business strategy: A global planning approach.* Englewood Cliffs, NJ: Prentice-Hall.

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