

NBER WORKING PAPER SERIES

THE ALTERNATIVE MINIMUM TAX  
AND THE BEHAVIOR OF  
MULTINATIONAL CORPORATIONS

Andrew B. Lyon  
Gerald Silverstein

Working Paper No. 4783

NATIONAL BUREAU OF ECONOMIC RESEARCH  
1050 Massachusetts Avenue  
Cambridge, MA 02138  
June 1994

The authors are grateful to Alan Auerbach, Jim Hines, Glenn Hubbard, and seminar participants at NBER and the Office of Tax Analysis for helpful discussions and comments. The views expressed in this paper are those of the authors and not those of the U.S. Department of Treasury or the National Bureau of Economic Research. This paper is part of NBER's research program in Public Economics.

THE ALTERNATIVE MINIMUM TAX  
AND THE BEHAVIOR OF  
MULTINATIONAL CORPORATIONS

ABSTRACT

This paper examines the extent to which U.S.-based multinational corporations are affected by the alternative minimum tax. More than half of all foreign-source income received by corporations in 1990 was earned by corporations subject to the alternative minimum tax. The AMT rules potentially affect multinational corporations in a manner different from their effect on domestic corporations. The paper examines the differential incentives the AMT creates for locating investment either domestically or abroad and considers how the incentives for the repatriation of foreign-source income are affected by the AMT. Tax return data of U.S.-based multinationals are examined to see the extent to which these incentives may influence the repatriation of foreign-source income.

Andrew B. Lyon  
Department of Economics  
University of Maryland  
College Park, MD 20742  
and NBER

Gerald Silverstein  
Office of Tax Analysis  
U.S. Department of Treasury  
Washington, D.C. 20220

## I. INTRODUCTION

The alternative minimum tax (AMT) was designed as part of the 1986 Tax Reform Act in response to concerns that a number of firms that reported positive "book" profits to their shareholders paid no corporate tax to the Federal Government. A corporation is required to calculate its tax liability under both the regular tax rules and the AMT rules, and it pays tax according to the system that results in the largest income tax liability.

The AMT rules potentially affect multinational corporations (MNCs) in a manner quite different from their effect on domestic corporations. First, the taxable income of domestic corporations (and that of the domestic operations of MNCs) is generally increased due to restrictions on deductions under the AMT and the inclusion of certain income that would be excluded from taxation under the regular tax. However, for foreign operations, deductions are quite similar for AMT and regular tax purposes.

Second, although the domestic tax base is generally larger under the AMT than the regular tax, the tax rate on all AMT income is 20 percent rather than the 34 or 35 percent rate that generally applies to corporations under the regular tax system.<sup>1</sup> As a result, whether a firm pays tax under the AMT depends on the particular sources of income and types of deductions received by the firm. For U.S.-based MNCs, the lower marginal rate of taxation under the AMT may present the firm a timing opportunity to repatriate income from low-tax foreign countries. Repatriated income is less likely to be subject to U.S. tax, or will be subject to a smaller amount of tax, because foreign tax

credits can shelter a greater percentage of taxable income.

Third, a separate AMT provision limits the total amount of tax that may be offset through foreign tax credits. For a firm for which this provision is a binding constraint, positive amounts of U.S. tax will be paid on repatriated dividends even if the firm would otherwise have excess foreign tax credits.

The AMT affects a significant number of firms.<sup>2</sup> In 1990 the corporate AMT accounted for 8.5 percent of corporate tax receipts, or \$8.1 billion.<sup>3</sup> Including regular taxes paid by these AMT firms, AMT firms paid 21.4 percent of all corporate income tax. Approximately 25 percent of corporations with assets in excess of \$50 million paid AMT. Among the largest firms, those with assets in excess of \$500 million, the proportion of firms paying AMT was 30.6 percent.

Among multinational firms, AMT incidence is slightly more prevalent. This is partly due to the correlation between firm size and AMT liability and the fact that the largest firms are more likely to receive foreign-source income.<sup>4</sup> Among firms in 1990 filing form 1118--the form on which foreign tax credits are calculated--28 percent of those with assets in excess of \$50 million paid AMT. Among these multinationals with assets in excess of \$500 million, 33.3 percent paid AMT. Of all form 1118 filers, 53 percent of all assets and 56 percent of all foreign-source income was accounted for by corporations paying AMT.

The existence of the AMT can affect a multinational firm in a number

of different ways, from the design of dividend repatriation strategies to locational choice of real investment. In this paper we outline how incentives can be affected by the AMT and present data suggestive of how important these effects may be.

The next section of the paper describes the mechanics of calculating AMT and the limitations placed on the use of foreign tax credits against AMT. Section III considers the relative investment incentives for locating investment domestically and abroad for an AMT firm. Section IV examines the incentives for repatriating foreign-source income under the AMT. In section V, tax return data of corporations are examined to analyze the prevalence of AMT status among U.S.-based multinationals, their receipt of foreign-source income, and the tax prices faced by these firms on additional repatriations of foreign-source income. A concluding section summarizes the findings and suggests directions for continuing research in this area.

## II. DETERMINATION OF AMT

A firm calculates its AMT by making a number of modifications to its taxable income reported for regular tax purposes. Here we briefly describe the steps in calculating AMT (summarized in Table 1). More detail on the most important modifications is provided below.

The starting point for computation of the AMT is the firm's regular taxable income before any deduction for net operating losses (NOL). To this

amount, the firm adds back a number of deductions that are restricted under the AMT and certain sources of income not taxable under the regular tax rules (adjustments and preferences). NOL deductions may offset up to 90 percent of this sum. Subtracting allowable NOL deductions results in alternative minimum taxable income (AMTI). AMTI is then reduced by subtracting an exemption amount (a maximum amount of \$40,000, phased out ratably to zero for firms with AMTI between \$150,000 and \$310,000). Tax is calculated by multiplying this net amount by the 20 percent AMT tax rate. Tax may be reduced by a limited amount of AMT foreign tax credits, as described in more detail below. This yields the firm's tentative minimum tax. Tentative minimum tax is compared to regular income tax before all credits except the foreign tax credit and the possessions tax credit. If tentative minimum tax exceeds this amount of regular tax liability, the excess is payable as AMT, in addition to the firm's payment of its regular tax liability. Each dollar of AMT payments creates a dollar of AMT credits that may be used in future years only against regular income tax liability. AMT credits may not be used to reduce regular tax liability below tentative minimum tax.

A. Adjustments and Preferences

A number of adjustments and preferences are added back to regular taxable income to derive AMTI. The most notable of these are the adjustments for depreciation and Adjusted Current Earnings. These two

adjustments are examined in detail. Other adjustments and preferences include amortization of pollution control facilities, amortization of mining and development costs, basis adjustments in determining gain or loss from the sale of property, income from long-term contracts and installment sales, merchant marine capital construction funds, depletion deductions, certain tax-exempt interest income, intangible drilling costs, and bad debt reserves of financial institutions.

#### 1. Depreciation

For domestic assets placed in service after 1986, recovery periods under the AMT are equal to the asset's class life (ADR midpoint). These recovery periods can be up to twice as long as those provided under the regular tax. Depreciation deductions for equipment are calculated using the 150-percent declining balance method switching to straight line. Under the regular tax, most equipment qualifies for the more accelerated depreciation method of 200-percent declining balance switching to straight line. Depreciation deductions under the AMT are also limited by the adjustment for Adjusted Current Earnings, described below.

For property used abroad by a branch or a foreign subsidiary, depreciation deductions are the same for regular tax and AMT purposes. Foreign-use property of a branch is depreciated using the straight-line method over the asset's class life. For property held by a foreign subsidiary, the

Earnings and Profits method is used under both the AMT and regular tax (this method results in depreciation allowances similar to those used for a foreign branch).<sup>5</sup>

## 2. Adjusted Current Earnings

The adjustment for Adjusted Current Earnings (ACE) is based on the calculation of Earnings and Profits. For taxable years after 1989, if ACE exceeds AMTI before NOL and before the ACE adjustment, AMTI is increased by 75 percent of the difference.<sup>6</sup>

ACE includes items of income not included in AMTI, such as tax-exempt interest, and ACE does not allow certain deductions, such as the dividends received deduction.

For domestic property placed in service in 1990 through 1993, depreciation is calculated using the straight-line method over the asset's class life. There is no additional ACE depreciation adjustment for foreign-use property.

Prior to 1990, a book income adjustment was used instead of ACE. Under the book income adjustment, taxable income was increased by 50 percent of the difference between book income and AMTI calculated without regard to the book income adjustment and before NOL.

## B. Allowable AMT Foreign Tax Credit

AMT foreign tax credits differ from the foreign tax credits claimed

by the taxpayer against regular income tax, although the process of calculating them is similar. Under both the regular tax and the AMT, the foreign tax credit that may be claimed in a given year is limited to the amount of U.S. tax that would have been paid on the foreign income. This limitation is calculated separately for each income category or "basket".

The U.S. tax that would have been paid on the foreign income is calculated by multiplying (a) the ratio of *foreign income* to *worldwide income* by (b) the taxpayer's *U.S. tax liability* (before use of foreign tax credits). Under the AMT, *foreign income*, *worldwide income*, and *U.S. tax liability* used in this calculation are all calculated using the AMT rules. The U.S. component of worldwide income will differ from that used in the regular tax computation chiefly due to the various adjustments and preferences described above. Foreign income will vary to a lesser extent, because the depreciation deductions taken for foreign-use property under the regular tax rules are the same as under the AMT. Differences in the apportionment of certain expenses jointly allocable between domestic and foreign-source income may cause other differences in the ratio of foreign income to worldwide income under the AMT. For example, interest expense is generally allocated in proportion to the tax basis of domestic and foreign assets. The tax basis of domestic assets will be higher under the AMT than under the regular tax since depreciation deductions are taken more slowly. The tax basis of foreign assets is generally

the same under the AMT as under the regular tax. As a result, a greater share of interest expense is domestically sourced under the AMT than under the regular tax.<sup>7</sup>

After computing the foreign tax credits for each separate limitation category using AMT rules, a second, overall limitation is applied on the amount of foreign tax credits that may be used against AMT. The combined use of NOL deductions and AMT foreign tax credits may not reduce tentative minimum tax by more than 90 percent. AMT foreign tax credits denied due to the 90 percent limitation are treated like other excess foreign tax credits, and may be carried back 2 years and carried forward 5 years to offset tentative minimum tax.

The following example illustrates the operation of the 90 percent limitation under the AMT. Assume the firm has regular tax liability before any credits of \$510,000 and regular foreign tax credits of \$500,000. In the absence of the AMT the firm would have total U.S. tax liability of \$10,000. Now assume that for AMT purposes, the firm has AMT NOL deductions of \$250,000 (line 4 of Table 1), AMT before credits of \$450,000 (line 9 of Table 1), and AMT foreign tax credits before application of the 90 percent limitation of \$410,000. Together the use of AMT NOL deductions and AMT foreign tax credits cannot reduce the firm's tentative minimum tax by more than 90 percent of the amount that would occur in the absence of NOLs and foreign tax credits. The AMT NOL deductions had the effect of reducing the firm's

tentative minimum tax by \$50,000 ( $\$250,000 \times .20$ ), so that in the absence of NOLs and foreign tax credits, tentative minimum tax would be \$500,000. The combined use of NOLs and foreign tax credits may not reduce tentative minimum tax below \$50,000 (a 90 percent reduction). As a result, only \$400,000 of AMT foreign tax credits may be used. Tentative minimum tax is \$50,000, and AMT payment is \$40,000 in addition to the \$10,000 payment of regular tax liability.

AMT payment does not change the characterization of the firm's regular tax foreign tax credits. The firm is assumed to have used \$500,000 in regular foreign tax credits, creating neither a carryback nor carryforward situation for regular tax purposes. Any of the firm's AMT foreign tax credits denied due to either the operation of the separate limitations or the 90 percent limitation may be carried back two years to offset prior years' tentative minimum tax and up to 5 years forward to offset future tentative minimum tax. The AMT payment of \$40,000 creates \$40,000 in AMT credits that may be used in future years to offset regular tax.

### III. INCENTIVES AFFECTING CAPITAL INVESTMENT

As described above, the depreciation deduction for foreign-use property is the same for both regular tax and AMT purposes. Whereas for domestic property the AMT generally creates a tax penalty for new investment undertaken by an AMT firm relative to the incentives faced by a regular tax

firm, the opposite may be the case for foreign-use property.<sup>8</sup> Under the AMT, a firm claims the same depreciation deductions as it would for regular tax purposes for foreign-use property, but income generated by the investment can be taxed at only 20 percent under the AMT rather than the 34 or 35 percent tax rate applying under the regular tax system. If this were the only difference between the regular and AMT systems, a firm permanently on the AMT must have a lower cost of capital for foreign-use property than a regular tax firm: The taxable income of the property is the same, but the rate of tax is lower on the AMT.

As a result, under these assumptions, foreign-use property is treated more favorably under the AMT than under the regular tax, while domestic property is treated less favorably under the AMT than under the regular tax. The AMT rules thus create an unambiguous reduction in the relative price of investment in foreign-use equipment to domestic-use equipment.

Several elaborations to this analysis can be made. First, if the foreign country's rate of tax on the investment exceeds the U.S. regular rate of tax, then the foreign investment creates excess tax credits. For a firm permanently in an excess credit position, the foreign country's tax rate is the effective rate of tax on this investment. However, because domestic investment is still discouraged under the AMT relative to the regular tax, the relative price of foreign-use equipment to domestic-use equipment is still lower for an AMT firm than a regular tax firm.

Second, the cost of financing investment for an AMT firm is likely to be higher than for a regular tax firm when debt finance is used. This is because interest payments are deductible at the corporate statutory tax rate (34 or 35 percent for a regular tax firm and 20 percent for an AMT firm). The after-tax cost of a dollar of interest payments thus rises from 65 or 66 cents to 80 cents on the AMT.<sup>9</sup> Thus while the absolute cost of investment is higher on the AMT for debt-financed investment, the relative price of foreign investment to U.S. investment is still lower for the AMT firm.

The magnitude of the change in the relative price of foreign investment to domestic investment for an AMT firm to a regular tax firm can be calculated. Because the assumption of permanent AMT liability is likely to be an extreme one, it is worth examining the changes in relative incentives for domestic and foreign investment for firms only temporarily on the AMT with the incentives faced by regular tax firms.<sup>10</sup> The calculations below assume that the firm is in excess limitation status for foreign tax credits; the investment is equity-financed so that there is no change in the firm's discount rate; and all income flows (both receipts and deductions) on the foreign investment are immediately repatriated to the U.S. parent (as would occur if the property were held by a foreign branch). The corporate marginal effective tax rate is calculated separately for an aggregate category of equipment and for commercial structures using the tax rules in effect from 1990 to 1992.<sup>11</sup>

Table 2 compares the corporate marginal effective tax rates for

equipment and structures under permanent regular tax status and temporary 5-year or 10-year initial periods of AMT liability.<sup>12</sup> For equipment located in the U.S., a regular tax firm faces a marginal effective tax rate of 26.8 percent. The same investment located abroad faces a 38.3 percent effective tax rate under the regular tax system. In terms of the cost of capital net of depreciation, this is an increase of 18.6 percent. For a firm with an initial 5-year period of AMT liability, equipment located in the U.S. has a marginal effective tax rate of 32.5 percent. For this AMT firm, the effective tax rate on foreign-use equipment is 36.8 percent. The cost of capital net of depreciation for the foreign-investment relative to the domestic investment increases by 6.8 percent. Finally, for the AMT firm facing a 10-year temporary period of AMT liability, the marginal effective tax rate for domestic equipment is 33.0 percent, while it is 33.3 percent for foreign-use equipment. The cost of capital net of depreciation for foreign-use property relative to domestic-use property is only 0.45 percent higher for this firm.

This analysis suggests that the AMT creates a *relative* incentive to locate investment abroad rather than in the U.S. Of course, it can also be seen from the table that foreign-use property is always treated less preferentially than domestic property for a firm facing a *given* tax system. Thus it is not correct to say that the AMT creates an *absolute* incentive to invest abroad rather than domestically. Rather, it is the incentive *relative* to

the regular tax system that favors foreign-use equipment investment over domestic investment.

Table 2 shows that for investments in structures, the marginal effective tax rate is very similar for both AMT firms and regular tax firms. Even here, there is a slightly smaller increase in the cost of capital for foreign investment relative to domestic investment for AMT firms than for regular tax firms, reinforcing the results found for equipment investment.

Finally, it is worth emphasizing that the cost of capital calculations presented here are based on a specific set of assumptions that may not be generally applicable. In particular, it was assumed that earnings of the foreign subsidiary were repatriated immediately. Because such income may be deferred for U.S. tax purposes, the tax status of the firm at the time of the investment may not affect the cost of capital of foreign-use property. Rather, the tax rate of the firm at the time of repatriation may be more relevant.<sup>13</sup> However, even in the case where the cost of capital of foreign-use equipment is the same for regular and AMT purposes, the fact that the cost of capital of domestic-use equipment is increased on the AMT relative to the regular tax creates a relative incentive for AMT firms to undertake investment abroad at the expense of domestic investment.

#### IV. INCOME REPATRIATION INCENTIVES

The differences in statutory rates and foreign tax credit calculations

create the potential for AMT firms to face different incentives for the receipt of foreign-source income than if they were subject to only the regular tax. Hines and Hubbard (1990), Altshuler and Newlon (1993), and Altshuler, Newlon, and Randolph (1994) have shown that firms take advantage of deferral and timing opportunities to reduce their global tax liabilities on foreign-source income. This section considers the different tax positions faced by an AMT firm and its incentive to receive foreign-source income.

A number of potential tax situations might be considered in evaluating the incentive for dividend repatriation and deferral. The variety of tax situations is somewhat larger under the AMT than for regular tax purposes, because the firm's foreign tax credit position for regular tax purposes--i.e., whether it is in excess credit or excess limit--may not be the same as its position under the AMT. In addition, the firm may be in excess credit position under the AMT due to either the separate income category limitations or the 90 percent limitation, each of which may result in a different incentive for repatriation.

Before considering the foreign tax implications of the AMT, it may be useful to examine the effects of an AMT firm earning additional income in the absence of foreign tax interactions. Consider a firm that receives an additional dollar of income that is fully included in both minimum taxable income and regular taxable income. The net effect of this income on overall current year tax liabilities is an increase in tax payments of 20 cents, and a

*decrease* in the firm's AMT credits of 14 cents. This result can be derived as follows: The additional dollar of income increases the firm's regular tax liability by 34 cents (assuming it is subject to the 34 percent marginal tax rate) and increases the firm's tentative minimum tax by 20 cents. Because AMT is defined as the difference between regular tax payments and tentative minimum tax, AMT falls by 14 cents. The net increase of 20 cents is the sum of the increase in regular tax liability and the decrease in AMT.

Now consider the same situation, but additionally assume that the firm had AMT NOL deductions that were restricted due to the 90 percent limitation. In this case, an additional dollar of income would cause the firm's net tax payments to increase by 2 cents. This is because the firm's regular tax would increase by 34 cents (assuming the firm is subject to this regular tax rate), but the firm's tentative minimum tax would increase by only 2 cents. (The dollar of additional taxable income would allow the use of an additional 90 cents in AMT NOLs. AMTI would increase by 10 cents, and tentative minimum tax would increase by  $.20 \times 10$  cents.) AMT would decline by 32 cents, reducing future AMT credits by 32 cents.<sup>14</sup>

Next we consider foreign tax credit interactions and their effect on AMT liabilities.

A. Excess Credit Positions

Initially we assume the firm is in excess credit position for both

regular tax and AMT calculations. An AMT firm could be in excess credit due to either the conventional limitation on foreign tax credits based on the ratio of foreign to worldwide income or because of the 90 percent limitation. We consider both cases below.

1. 90% Limitation Not Binding

We assume that for regular tax purposes the firm is subject to the 34 percent tax rate. Under the regular tax, an additional dollar of earnings repatriated results in no additional regular tax payments, and the stock of regular foreign tax credits carried to another year increases by  $T^* - .34$ , where  $T^*$  is the foreign tax payment on this income.<sup>15</sup>

Similarly for AMT purposes, assuming the 90 percent limitation is not binding, the additional dollar of earnings repatriations results in no additional AMT and the stock of AMT foreign tax credits carried to another year increases by  $T^* - .20$ .

If the firm was also in excess credit for the previous two years, the foreign tax credits must be carried forward for up to five years. If  $T^*$  is less than .34, the firm has reduced the amount of regular tax credits it must carry forward. If  $T^*$  is greater than .34, the only cost to a regular tax firm of the earnings repatriation is if the additional regular foreign tax credit carryforward created will not be used in the next five years. In this case, the firm might have been better off deferring receipt of the foreign earnings until a time when

the foreign tax credit could offset regular tax. The same incentives should generally guide an AMT firm. The AMT firm, however, should consider its ability to use both its regular and AMT foreign tax carryforwards in future years.<sup>16</sup>

Rows 1 and 2 of Table 3 summarize these tax price effects for firms in an excess credit position under both the regular tax and the AMT.

## 2. 90% Limit Binding

The firm is assumed to be in excess credit for regular tax purposes. For AMT purposes, the firm is assumed to be marginally constrained from using additional AMT foreign tax credits because of the 90 percent limitation.<sup>17</sup> For regular tax purposes, the effect of an additional dollar of earnings repatriated is the same as above, resulting in no current tax liability. Under the AMT, however, the additional dollar of repatriated earnings increases AMT before credits (line 9 of Table 1) by 20 cents. Only an additional 18 cents of AMT foreign tax credits may be used to offset this tax, so tentative minimum tax increases by 2 cents. Because current regular tax liability is unchanged by the receipt of this earnings, AMT increases by 2 cents and a 2 cent AMT credit is generated. AMT foreign tax credits carried to another year increase by  $T^* - .18$ .

Relative to the case where the 90 percent limitation is not binding, there is a diminished incentive to repatriate earnings. This is true regardless

of whether the marginal dividend is from a high-taxed country or a low-taxed country.

One case in which an AMT firm facing the 90 percent limitation would still have a tax incentive to repatriate earnings is if it had regular NOL carryforwards that would otherwise expire unused.<sup>18</sup> (In this case the firm's regular tax marginal tax rate is 0 rather than 34 percent.) By repatriating an additional dollar of foreign earnings the firm can essentially convert the expiring tax shield into a regular foreign tax credit with a new 5-year carryforward period. The cost to the firm of preserving this tax shield is the 2 cent payment of AMT today, less the present value of the 2 cent AMT credit the firm will claim in a future year.

Rows 1 and 3 of Table 3 summarize the tax cost of earnings repatriations for firms in an excess credit position for regular tax purposes but subject to the 90 percent limitation for the AMT.

B. Excess Limit Positions

We initially assume the firm is in excess limit position for both the regular tax and the AMT. Under the regular tax, an additional dollar of earnings repatriations reduces regular tax liability by  $T^* - .34$  (assuming the firm is subject to the 34 percent regular tax rate). Earnings repatriated from high-tax countries ( $T^* > .34$ ) thus lower current regular tax liability.

For a firm on the AMT, tentative minimum tax is reduced by

$T^* - .20$  from the additional earnings. Since AMT reflects the difference between regular tax liability and tentative minimum tax, AMT declines by 14 cents. Total current tax liability, the sum of regular tax liability and AMT, thus declines by  $T^* - .20$ .

The incentive for earnings repatriation is greater for a firm on the AMT. The reduction in current tax payments is 14 cents larger relative to the situation of a firm facing only the regular tax. Current tax payments decline for any  $T^* > .20$ . The additional 14 cents saving today comes at a cost of a 14 cent reduction in the AMT credit that could be claimed at a later date.

The first two rows of Table 4 summarize the tax cost of earnings repatriations for firms in an excess limit position for regular tax purposes.

### C. Different Regular and AMT Credit Positions

The incentive to repatriate earnings while in excess limit position could potentially lead to a situation where a firm is in excess limit position for regular tax purposes, but is in excess credit position on the AMT due to either the conventional limitation or the 90 percent limitation on foreign tax credits. As explained below, it is also possible for the firm to be in excess credit position for regular tax purposes but excess limit for the AMT.

First, we consider the case of a firm that is in an excess limit position for regular tax purposes, but is in excess credit under the AMT due to the conventional limit. Such a firm lowers its regular tax liability by  $T^* - .34$

from an additional dollar of earnings, but its tentative minimum tax liability is unchanged. Since AMT is the difference between tentative minimum tax and regular tax, AMT rises by  $T^* - .34$ , leaving total current tax liability--the sum of regular tax and AMT--unchanged. The additional AMT results in AMT credits of  $T^* - .34$ . A firm in this position faces no current cost for earnings repatriations. Foreign tax credits limited under the AMT may be carried to another year. The only cost of earnings repatriation is if the firm anticipates prolonged AMT status and expects to be in AMT excess credit position in these years. In this instance, if  $T^* > .20$ , the AMT foreign tax credit carryforwards might expire unused, and the firm might have been better off deferring these earnings until it could make use of the AMT foreign tax credits. (If  $T^* < .20$ , the AMT firm benefits from using up AMT foreign tax credits that would otherwise have expired unused.)

Second, we consider the 90 percent limitation. An additional dollar of foreign earnings affects regular tax liability as described above for an excess limit firm, decreasing regular tax liability by  $T^* - .34$ . Under the AMT, the additional earnings will *increase* tentative minimum tax by 2 cents. This occurs because only 90 percent of the additional minimum tax liability may be offset with AMT foreign tax credits. As a result, total current tax liability increases by 2 cents. The savings in current tax liability relative to the regular tax is  $.32 - T^*$ . As a result, AMT credits decline by this amount.

Relative to the firm's regular excess limit tax status, the AMT provides the firm a low cost opportunity to repatriate earnings from foreign countries with low  $T^*$  (i.e.,  $T^* < .32$ ).

These two cases are summarized in rows 3 and 4 of Table 4.

Finally, we consider the case of a firm that is in excess credit position for regular tax purposes but is in excess limit position under the AMT. This situation could arise where the firm has regular tax foreign tax credit carryforwards (or NOL deductions), but these carryforwards do not exist under the AMT. Such a firm faces no increase in regular tax liability from an additional dollar of foreign earnings. AMT liability increases by  $.20 - T^*$ . As a result, earnings repatriated from countries with  $T^* > .20$  can lower current AMT liability. The reduction in AMT reduces the firm's AMT credit by an equivalent amount. This case is considered in row 4 of Table 3.

#### D. Summary of Repatriation Incentives

In summary, this section has identified a number of cases under which earnings repatriation is favored for an AMT firm relative to the firm's regular tax status. Table 5 provides a side-by-side comparison of the possible current tax prices faced by regular tax and AMT firms. For firms with AMT status, the incentive for earnings repatriation relative to regular tax status is noted in parentheses beneath the tax price.<sup>19</sup>

Of the six possible combinations of tax prices, in only one case is the

AMT tax price greater than the regular tax price for all possible foreign tax rates ( $T^*$ ). This case is where the firm faces the 90 percent limitation on foreign tax credits under the AMT, but for regular tax purposes is in an excess credit position. Even in this case, the firm faces only a 2 cent tax per dollar of repatriated earnings.

In four cases, the AMT tax price is less than the regular tax price for some foreign tax rates. In the remaining case, the tax prices are identical.

The analysis in this section suggests that in general the AMT offers firms the opportunity for low cost earnings repatriations. The next section presents data on the extent of AMT liability among multinationals and their foreign earnings repatriations while on the AMT.

## V. TAX RETURN DATA OF MNCS

Using Internal Revenue Service tax return information, we are able to examine the prevalence of AMT status among multinational corporations. We are further able to examine the receipt of foreign-source income by these multinationals to explore the possibility that these firms alter their pattern of income repatriation to take advantage of the timing opportunities made possible by the firms' AMT status.

### A. Data Description

The data used in this analysis are from the 1990 Internal Revenue Service, Statistics of Income microdata files. Two primary files are used.

Data concerning general characteristics of firms such as assets and tax liabilities are obtained from the corporate 1120 file. Data relating to foreign-source income and the credit position of firms with foreign tax credits are from the corporate 1118 file. Both files contain tax information prior to audit or amendment of the return.

The 1120 file consists of a stratified sample of the corporate population. Pass-through entities such as S-corporations, regulated investment companies, and real estate investment trusts are excluded from our analysis.<sup>20</sup> Firms with partial year returns are also excluded. The remaining data represent 2,040,110 corporations consisting of approximately 55,000 actual observations. All corporations with more than \$250 million in assets are included in the sample, while corporations in lower asset categories are sampled at a rate varying from 50 percent to 0.25 percent. The sample includes taxpayers filing returns with accounting periods ending between July 1990 and June 1991.

Corporations included in the 1118 file consist of those corporations on the 1120 file that additionally claimed a foreign tax credit on form 1118.<sup>21</sup> An AMT firm that claims foreign tax credits against its regular tax liability will file a form 1118. A separate form indicating foreign tax credits used against AMT is not required to be filed. We estimate the foreign tax credit position for AMT purposes by substituting the appropriate AMT variables for the regular tax counterparts in the limitation calculation of form

1118. The AMT variables are taken from the AMT tax form, form 4626.

A number of corporations that receive foreign-source income do not file a form 1118. Such firms may be in a net operating loss position or may have other credits or NOL carryforwards that reduce their tax liability to zero, even before the use of foreign tax credits. The data in this paper regarding repatriated foreign-source income consist only of those firms that claimed a foreign tax credit.

B. AMT Status of Recipients of Foreign-Source Income

Table 6 shows AMT incidence for all corporations and for form 1118-filing corporations in 1990. While only 1 to 2 percent of all corporations incur AMT liability, a significantly higher percentage of larger corporations pay AMT. Of corporations with assets in excess of \$50 million, 24.6 percent of corporations paid AMT. Among 1118-filers with assets in excess of \$50 million, 28.1 percent paid AMT. AMT incidence is even more prevalent among the largest asset category, those with assets in excess of \$500 million. Among all corporations in this largest asset category, 30.6 percent paid AMT. Of 1118-filers in this largest asset category, 33.3 percent paid AMT.<sup>22</sup>

Table 7 presents the same information, but weights each firm by its reported assets.<sup>23</sup> Because AMT incidence is increasing with asset size, a larger fraction of total assets is affected by the AMT than suggested by the number of firms paying AMT. Nearly 40 percent of all assets reported by

corporations are owned by firms paying AMT. Among 1118-filers, AMT incidence is significantly greater when weighted by assets. Fifty-three percent of assets owned by 1118-filers are owned by 1118-filers paying AMT. While only about 830 form 1118-filers pay AMT, their assets account for just under 53 percent of the assets owned by AMT-payers.<sup>24</sup>

The upper-panel of Table 8 shows foreign-source income and foreign-source income as a share of assets for 1118-filers paying regular tax and paying AMT. In total, 56 percent of all foreign-source income is earned by AMT firms. As a result, incentives for the receipt of the majority of foreign-source income are governed by the rules and tax rates affecting the AMT rather than the regular tax.

The upper-panel of Table 8 can also be used to examine whether a greater share of foreign-source income is reported by 1118-filers subject to the AMT than would be expected based on the share of assets reported by these firms. As noted earlier the measure of assets used here may understate the current value of foreign subsidiary assets. Additionally, because the measure of assets also includes the book value of domestic assets, the ratio of foreign source income to assets should not be interpreted as the return on a firm's foreign assets.

In aggregate, there does not appear to be a significant difference in the ratio of foreign-source income to assets for AMT firms and non-AMT firms. For example, foreign-source income comprises 1.31 percent of assets

for non-AMT payers and 1.49 percent of assets for AMT payers, a difference of only 14 percent. Of 1118-filers with assets less than \$500 million, however, foreign-source income of non-AMT firms comprises 2.47 percent of assets, while for the AMT firms foreign-source income comprises 6.48 percent of assets, a strikingly large difference of more than 150 percent.

The bottom panel of Table 8 presents the same data for foreign-source dividends (except deemed dividends).<sup>25</sup> Foreign-source dividends can be viewed as a relatively more discretionary component of foreign income and therefore may better represent the voluntary repatriation of income by the U.S. parent. A similar story holds as in the top panel. In aggregate, foreign-source dividends account for 0.86 percent of assets for non-AMT corporations and account for only 0.72 percent of assets for AMT firms. The fact that dividends of non-AMT firms comprise a higher percentage of assets than for AMT firms is entirely due to dividends received by the highest asset category. When only 1118-firms with less than \$500 million in assets are examined, dividends are found to comprise 2.00 percent of assets for the non-AMT firms and 6.55 percent of assets for the AMT firms, or a rate more than 200 percent higher for the AMT firms.

One would like to examine the 1118-filers in more detail together with better information on their foreign subsidiary assets before reaching definitive conclusions on how the AMT changes their behavior regarding the receipt of foreign income. For example, in the case of the smaller 1118-filers, we need

to distinguish between two hypotheses: (1) Because these firms were subject to the AMT they increased their receipt of foreign income; versus (2) These firms were subject to the AMT, but for reasons exogenous to the AMT treatment of foreign-source income chose to repatriate income. The second hypothesis may be true for a number of reasons. Consider the possibility that AMT status is indicative of low earnings and that these firms may be cash-flow constrained. It might not be unreasonable to expect that a cash-flow constrained firm would seek to increase its repatriation of foreign income. The fact that low cash flow and AMT status are correlated may falsely imply that the AMT status encouraged repatriations.<sup>26</sup>

C. The Foreign Credit Position of AMT Taxpayers

As described in section IV, the tax price of foreign-source income for AMT firms and the advantage of dividend repatriation while subject to the AMT relative to the regular tax system depends on both the foreign tax credit position for regular tax purposes and for the AMT. As summarized earlier in Table 5, six potential tax price differentials exist for a firm subject to the AMT. In Table 9, we group each 1118-filer into these six AMT cells (and two regular tax cells for non-AMT taxpayers)<sup>27</sup> based on the foreign tax credit position of the firm. The table separately classifies firms with zero regular taxable income from those with positive regular taxable income. Firms with current losses or NOLs are "generically" an excess credit firm for regular

tax purposes (an additional dollar of foreign-source income will not give rise to regular tax liability) and thus face the same incentives as any other excess credit firm for regular taxes, but it is useful to distinguish among these firms for AMT purposes. The foreign tax credit position shown in Table 9 is for the basket category accounting for the largest share of the firm's foreign-source income.<sup>28</sup> The credit position is based on the last dollar of foreign-source income received for the basket.

First we consider firms with a regular tax excess credit position and with a positive amount of regular tax. None of these firms are in excess limit position for the AMT, as anticipated given the lower AMT statutory rate. Approximately 90 percent of these firms that face AMT liability also have excess credits for purposes of the AMT and thus face the same marginal incentives for dividend repatriation (343 of 385 firms). The remaining 10 percent of these firms that pay AMT (42 firms) are subject to the 90 percent limitation. These firms pay an extra tax of 2 cents at the margin for each dollar of foreign-source income relative to their regular tax liability.

Table 10 displays the amount of foreign-source income for the same cells as shown in Table 9. The 42 firms subject to the 90 percent limitation account for approximately 13 percent of all foreign-source income earned by 1118-corporations (\$11.34 billion/\$88.40 billion) and 23 percent of the foreign-source income received by AMT-payers. A maximum of \$227 million in extra current year AMT tax payments are made by these firms due to the

90 percent limitation (0.02 times \$11.34 billion), since these firms would otherwise be in an excess credit position.<sup>29</sup> Firms in excess credit position for both AMT and regular tax purposes account for 27 percent of all foreign-source income and 47 percent of the foreign-source income earned by AMT-payers.

Next we consider firms with zero regular taxable income and positive AMT liability. A small number--about 11 percent, or 28 firms--are in excess limit position for the AMT. These firms have an incentive to repatriate income from countries with  $T^* > .20$ . Less than one percent of foreign-source income is attributable to these 28 firms. A larger number of firms and amount of foreign-source income is subject to the 90 percent limitation. About 4.5 percent of total foreign-source income and 8 percent of the foreign-source income of AMT-payers is in this cell. Extra tax payments resulting from this limitation are a maximum of \$80 million.

Finally, we consider firms with an excess limit position for regular tax purposes. A significant number of these firms also are in excess limit position under the AMT. These firms save in the current year 14 cents per dollar of foreign-source income received by being subject to the AMT. About 9 percent of the foreign-source income received by AMT-payers accrues to these firms. These firms save approximately \$590 million in current year taxes on their foreign-source income as a result of being subject to the lower AMT tax rate. Another significant group of the firms in excess limit for

regular tax purposes, accounting for about 6 percent of the foreign-source income received by AMT-payers, is in excess credit position under the AMT. This group of firms saves the difference between 34 percent and their average foreign tax credit rate (a number in excess of 20 percent) on each dollar of foreign-source income received. Finally, a slightly smaller share of the excess limit firms for regular tax purposes, 5 percent of the foreign-source income received by AMT-payers, is subject to the 90 percent limitation on foreign tax credits. The 90 percent limitation still results in lower U.S. tax payments by the amount that the average foreign tax rate is less than 32 percent per dollar of foreign-source income received.

In sum, it appears that total payments of tax on foreign-source income are lower for the AMT firms than if they were subject to the regular tax rules. The analysis, however, has been unable to determine whether the increased incentive to receive foreign-source income actually significantly affects repatriation behavior. While the data in Table 8 indicate that smaller firms on the AMT appear to have higher rates of repatriation of foreign income, it is indeterminate whether this is the result of a tax price advantage of AMT status or whether higher rates of repatriation are correlated with other factors leading to AMT status. Extension of the single-period analysis over a number of years for firms in our sample and linking the parent firm tax returns with information returns on the foreign subsidiaries (form 5471) will allow us to better examine alternative hypotheses.

## VI. CONCLUSIONS

This paper has shown the extent to which incentives of U.S.-based MNCs are affected by the AMT. More than half of all foreign-source income in 1990 was received by corporations subject to the AMT. As a result, the tax prices on foreign-source income created by the AMT may be at least as important as those created by the regular tax. While data shown in Gerardi, Milner, and Silverstein (1994) indicate that AMT incidence for the largest corporations in 1990 was approximately 25 percent greater than in 1989 or 1991, the large stock of unclaimed AMT credits accumulated by corporations suggests that the incentives created by the AMT will continue to be an important factor in the future. As shown in section III, the AMT may create a relative incentive for AMT firms to invest abroad rather than domestically. For firms interested in repatriating income from abroad, the AMT may create a temporary timing opportunity that allows repatriation of this income at a lower cost than if the firms were subject to the rules of the regular tax system. These two different incentives may have an ambiguous overall effect on U.S. domestic investment if repatriated income is retained by the parent in the United States. Alternatively, the two incentives together may suggest that the AMT provides an opportunity for firms to repatriate income from foreign locations with poor reinvestment opportunities and reinvest the funds abroad in different foreign locations with better opportunities to take advantage of the temporary relatively lower cost of capital.

Section V presents data on the different repatriation patterns of AMT firms and non-AMT firms. There is a general tendency for both AMT firms and non-AMT firms with assets under \$500 million to repatriate a larger amount of foreign-source income (relative to the assets of the firm) than for the largest MNCs. The smaller AMT firms, however, receive a significantly higher share of foreign-source income than their non-AMT counterparts. It appears that larger firms, those with assets in excess of \$500 million, may find permanent deferral of foreign-source income more advantageous than the temporary timing advantage offered by the AMT. The differences in behavior between the largest firms and the smaller firms may be consistent with the smaller firms facing cash-flow constraints on their investment opportunities, while the larger firms either have sufficient cash flow to undertake new investment or can raise outside funds at a relatively low cost. We hope in future research to examine more closely the differences in repatriation behavior between AMT firms and non-AMT firms, and make use of information reported by the foreign subsidiaries of the U.S. parents to determine whether the pattern of repatriation from these subsidiaries is consistent with predictions of tax-minimizing behavior of the parent firms.

## Footnotes

1. The 1993 Omnibus Reconciliation Act increased the regular corporate tax rate to 35 percent for firms with taxable income in excess of \$10 million, effective January 1, 1993. The prior law 34 percent tax rate continues to begin at taxable income of \$75,000. Phaseouts of the benefit of lower graduated rates under the regular tax create marginal tax rates of 39 and 38 percent for certain narrow ranges of income. There is no change in the AMT tax rate for corporations.
2. Gerardi, Milner, and Silverstein (1994) present data on the coverage of the corporate AMT from 1987 to 1991.
3. The actual effect on revenues may be greater because most business credits (such as the R&D tax credit) may not be claimed by firms on the AMT, and regular tax firms may not use these credits or the AMT credit to reduce their regular tax liability below the floor created by the AMT. The denied credits do not show up in the data as additional tax payments, but are carried forward into future years by the firms. As discussed in Lyon (1991), the AMT also affects total revenue collections by changing behavior. To the extent that tax-favored investments are discouraged relative to other investments, total revenue collections may be higher under the regular tax.
4. For example, even in the largest asset category, 1118-filers comprise 24.1 percent of the corporations, but account for 47.7 percent of the assets in the largest asset category.
5. Earnings and Profits is a separate measure of income used to determine the portion of a dividend deemed to be paid out of earnings and the portion paid out of capital. Earnings and Profits is also used in the calculation of the Adjusted Current Earnings adjustment as explained below.
6. If ACE is less than AMTI, AMTI may be reduced by 75 percent of this difference, but not to exceed the amount by which AMTI was increased in prior years due to the ACE adjustment. The 1993 Act repeals the ACE depreciation adjustment beginning in 1994.
7. The characterization of income across the limitation categories differs between the AMT and the regular tax for certain types of passive income. Certain income that would otherwise be placed in the passive income category is placed in the general limitation category if it is high-taxed. Income is determined to be high-taxed if the foreign tax rate on such income exceeds the regular corporate tax rate (for purposes of the regular tax computation) or the

AMT tax rate (for purposes of the AMT calculation).

8. While firms currently on the AMT are likely to have reduced incentives for domestic investment, the overall effect of the AMT on domestic investment is more difficult to ascertain. This is because the AMT also has an effect on firms that are currently paying regular tax but that anticipate a future period of AMT liability. These firms may have greater investment incentives currently than if they were to remain permanently on the regular tax. See Lyon (1990) for a discussion. The example discussed in the text considers incentives of firms currently subject to the AMT.

9. The loss in the value of the interest deductions under the AMT serves to increase the AMT credit a firm may claim in the future.

10. Gerardi, Milner, and Silverstein (1994) present data on the duration of AMT liability for firms between 1987 and 1991. Among a selected panel of AMT payers, 70 percent of taxpayers had AMT liability for two or fewer years of the five years in the panel. This calculation tends to understate the time period over which firms are affected by the incentives of the AMT for two reasons. First, many firms incurred liability in 1990 and 1991, and the length of time these firms will remain on the AMT is still unknown. Second, AMT credits may not be used to reduce regular tax liability below tentative minimum tax liability. For firms unable to fully use AMT credits against the regular tax, they effectively face the same marginal incentives as firms paying AMT. Between 1987 and 1990, \$17.2 billion was paid in AMT, but AMT credits claimed between 1988 and 1991 totalled only \$3.4 billion.

11. It is assumed that economic depreciation of the investment follows a geometric pattern, so that returns on the investment each period are proportional to its remaining value. Rates of depreciation are based on estimates by Hulten and Wykoff (1981). Annual inflation is assumed to be 3.8 percent, and the after-tax real rate of return is 5 percent. The cost of capital for equipment is based on a capital-stock weighted average of the cost of capital for 31 types of equipment. These and other assumptions follow Lyon (1990). The corporate marginal effective tax rate is calculated as  $(\rho-s)/\rho$ , where  $\rho$  is the cost of capital net of depreciation and  $s$  is the after-tax real return.

12. The period of temporary AMT liability includes both the period during which the firm is paying AMT and the period during which it uses up its AMT credits. Because AMT credits may not reduce regular tax liability below tentative minimum tax, a firm does not face the incentives of the regular tax system until past AMT credits are exhausted.

13. The next section examines whether the AMT presents an opportunity for repatriating such income.

14. If the firm had a tax loss for regular tax purposes, current tax liability would still increase by 2 cents. In this case the 2 cents would be from the AMT payment, so AMT credits would increase by 2 cents. The additional dollar of income would not change regular tax liability, but it would reduce by one dollar the amount of regular NOL carried forward. The reduction in regular NOL carryforwards can be thought to increase future regular tax liability by 34 cents, provided the NOL carryforward period would not have otherwise expired.

15. It is assumed that the foreign country has a classical corporate income tax system. See Altshuler and Newlon (1993) for variations on the tax price measure under split-rate and imputation corporate tax systems. The effect on worldwide tax liability of withholding taxes, which may be imposed by the foreign country when income is repatriated, is not specifically considered here. Tax prices examined in this section are based on tax payments to the United States.

16. The scenario becomes a little more complicated for a firm in an excess credit position under only one of the two parallel tax systems. This possibility is examined in more detail later.

17. The firm could be marginally constrained on its use of NOL deductions due to the 90 percent limitation. In this case, the following description of the change in AMT liability continues to hold, but AMT NOL deductions carried to another year would decline by 90 cents and AMT foreign tax credits carried to another year would increase by  $T^*$ .

18. A similar incentive exists if AMT NOLs would expire. Regular tax and AMT NOL deductions may be carried back 3 years and carried forward 15 years.

19. Because the AMT only alters the timing of tax payments by the firm (AMT credits may be carried forward for an unlimited duration), the present value of the deviation between the regular tax price and the AMT tax price is a function of both the current tax price, and the present value of the change in AMT credits (as well as the change in foreign tax credit carryforwards). Deviations in the current tax price are therefore more meaningful the longer the period that a firm remains subject to the AMT and the longer that the firm's foreign tax credit position for regular tax purposes remains unchanged.

20. Pass-through entities do not pay minimum tax, although the recipients of the income may owe minimum tax based on their own taxable income from all sources.

21. Recall that the 1120 file is a stratified sample, but includes all firms with greater than \$250 million in assets. Firms in this asset category account for over 90 percent of foreign tax credits. As a result, the stratification method is unlikely to result in significant sampling error of foreign-source income.

22. Non-financial corporations and corporations in finance and real estate were also examined separately. Among non-financial corporations with more than \$500 million in assets and filing a form 1118, 31.2 percent paid AMT. Of the financial corporations in this asset category filing a form 1118, 38.8 percent paid AMT.

23. It should be noted that for corporations with foreign subsidiaries, reported assets deviate even more substantially from replacement cost than for domestic firms. This is because the value of the foreign subsidiary is carried by the parent firm at the historic cost of the equity in the subsidiary. In addition to the deviation between current cost and historic cost of the original physical assets in the subsidiary, the value of accumulated retained earnings within the foreign subsidiary is not accounted for in the parent's books.

24. Of non-financial corporations filing a form 1118, 50.0 percent of the assets were owned by AMT-payers. Of the financial corporations filing a form 1118, 55.8 percent of the assets were owned by AMT-payers.

25. Deemed dividends are non-discretionary in the sense that they must be reported by the parent. (Firms have some planning opportunity on whether to choose to earn income that would be classified as a deemed dividend.) Non-deemed dividends may therefore represent the income flow over which the parent has the most control. Note that in certain asset categories the quantity of dividends reported in the bottom panel of Table 8 significantly exceeds the net foreign-source income reported in the top panel. This appears to be due to the reporting of expenses that reduce foreign-source income below the amount of dividends received.

26. Using other data, Hubbard and Hines (1990) find a strong correlation between foreign subsidiary dividend payments and parent dividend payments that might be suggested by a cash-flow constraint of the parent firm. Altshuler and Newlon (1993) find that the relationship of foreign subsidiary dividend payments to the parent is accounted for by a fixed effect for the parent, rather than the level of parent dividend payments.

27. Note that even regular taxpayers can face the identical incentives as an AMT payer to the extent that they are prevented from using AMT credits or other business credits to reduce regular tax liability below tentative AMT. We hope to separately identify these firms in later work.

28. For parent firms that are classified as non-financial firms this basket is nearly always the general limitation basket. This basket accounts for about 90 percent of the foreign-source income received by non-financial firms. Most of the remaining income for these firms appears in the passive basket. For financial firms, the basket selected is the financial services income basket. This basket accounts for 88 percent of the foreign-source income received by these firms.

29. This amount is a maximum cost because some of the foreign-source income may be fully shielded by foreign tax credits. It is only true at the margin that an additional dollar of foreign source income increases tax liability by 2 cents. Additional analysis indicates that the firms with foreign-source income facing the 90 percent limitation on the use of foreign tax credits against AMT are primarily facing the constraint due to the large amount of foreign tax credits available to the firms rather than the existence of NOLs.

## References

- Altshuler, Rosanne and T. Scott Newlon. 1993. The effects of U.S. tax policy on the income repatriation patterns of U.S. multinational corporations. In *Studies in international taxation*, ed., A. Giovannini, R.G. Hubbard, and J. Slemrod, 77-115. Chicago: University of Chicago Press.
- Altshuler, Rosanne, T. Scott Newlon and William C. Randolph. 1994. Do repatriation taxes matter? Evidence from the tax returns of U.S. multinationals. NBER working paper no. 4667.
- Gerardi, Geraldine, Hudson Milner and Gerald Silverstein. (forthcoming, 1994). The effects of the corporate alternative minimum tax: Additional results from panel data for 1987-1991. In *National Tax Association--Tax Institute of America, Proceedings of the eighty-sixth annual conference, 1993*.
- Hines, James R. and R. Glenn Hubbard. 1990. Coming home to America: Dividend Repatriations by U.S. Multinationals. In *Taxation in the global economy*, ed. A. Razin and J. Slemrod, 161-207. Chicago: University of Chicago Press.
- Hulten, Charles R. and Frank C. Wykoff. 1981. The measurement of economic depreciation. In *Depreciation, inflation, and the taxation of income from capital*, ed. C. Hulten, 81-125, Washington, D.C.: Urban Institute Press.
- Lyon, Andrew B. 1990. Investment incentives under the alternative minimum tax. *National Tax Journal* 43:451-465.
- Lyon, Andrew B. 1991. The alternative minimum tax: Equity, efficiency, and incentive effects. In *Economic effects of the corporate alternative minimum tax*, 51-82, Washington, D.C.: American Council for Capital Formation.
- Lyon, Andrew B. 1992. Tax neutrality under parallel tax systems. *Public Finance Quarterly* 20:338-358.

**Table 1**

**AMT Calculation**

1.		Regular Taxable Income, before NOL
2.	+	Adjustments and Preferences (including ACE)
3.	=	Taxable Income before NOL
4.	-	AMT NOL (up to 90 percent of line 3)
5.	=	AMTI
6.	-	exemption amount
7.	=	AMTI net of exemptions
8.	×	20 percent
9.	=	AMT before credits
10.	-	Allowable AMT Foreign Tax Credits (i) U.S. Tax × (Foreign Income)/(Worldwide Income) (ii) 90% limitation
11.	=	Tentative Minimum Tax
12.	-	Regular Tax (before all credits except Foreign Tax Credit and Possessions Tax Credit)
13.	=	AMT

Table 2

**Marginal Effective Tax Rates for Domestic and Foreign-Use Property**

(1) Asset	(2) Location	(3) Regular Tax	(4) 5-Year Temporary AMT	(5) 10-Year Temporary AMT
Equipment	U.S.	26.8%	32.5%	33.0%
	Foreign-use	38.3%	36.8%	33.3%
Structures	U.S.	35.6%	35.0%	33.3%
	Foreign-use	37.8%	36.9%	35.0%

See text for assumptions.

Table 3

**Tax Cost of Dividend Repatriation:  
Excess Credit Position on Regular Tax**

	<u>Current Tax Price</u>	<u>Regular FTC Carry- forwards</u>	<u>AMT Credit</u>	<u>AMT FTC Carry- forwards</u>
(1) Regular Tax Firm	0	T* - .34	n.a.	n.a.
<b><u>AMT Position:</u></b>				
(2) Excess Credit	0	T* - .34	0	T* - .20
(3) 90% Limitation	.02	T* - .34	.02	T* - .18
(4) Excess Limit	.20 - T*	T* - .34	.20 - T*	n.a.

Table 4

**Tax Cost of Dividend Repatriation:  
Excess Limit Position on Regular Tax**

	<u>Current Tax Price</u>	<u>AMT Credit</u>	<u>AMT FTC Carryforward</u>
(1) Regular Tax Firm	.34 - T*	n.a.	n.a.
<b><u>AMT Position:</u></b>			
(2) Excess Limit	.20 - T*	-.14	n.a.
(3) Excess Credit	0	T* - .34	T* - .20
(4) 90% Limitation	.02	T* - .34 + .02	T* - .18

Table 5

Summary of Current Tax Prices and Incentives for Dividend Repatriation Relative to Regular Tax Status

		Position for Regular Taxes	
		Excess Limit	Excess Credit
Position for Alternative Minimum Tax (AMT)	No AMT Liability	$.34 - T^*$	0
	Excess Limit	$.20 - T^*$ (advantage)	$.20 - T^*$ (advantage for $T^* > .20$ )
	90% Limitation	$.02$ (advantage for $T^* < .32$ )	$.02$ (slight penalty)
	Excess Credit	0 (advantage for $T^* < .34$ )	0 (neutral)

**Table 6 Counts of Corporations in 1990 By Size, AMT Status, and 1118 Status  
(Counts in Units)**

Asset Size Class (000) Equal or Greater Than:	Less Than:	All Corporations				AMT Incidence			
		Total	1118 Filers	1118 Filers /Total	Total	AMT Payers	1118 Filers /Total	All Corps.: AMT Payers /Total	1118 Filers: AMT Payers /Total
\$0	\$100	1,039,755	324	0.03%	1,109	1	0.00%	0.11%	0.31%
\$100	\$250	376,082	233	0.06%	1,097	0	0.00%	0.29%	0.00%
\$250	\$500	236,695	488	0.21%	2,329	91	3.89%	0.98%	18.55%
\$500	\$1,000	163,416	495	0.30%	4,426	42	0.95%	2.71%	8.49%
\$1,000	\$10,000	183,975	1,144	0.62%	14,297	131	0.91%	7.77%	11.42%
\$10,000	\$50,000	25,055	690	2.75%	4,482	153	3.41%	17.89%	22.13%
\$50,000	\$100,000	5,958	255	4.27%	1,335	58	4.35%	22.41%	22.81%
\$100,000	\$250,000	4,687	366	7.82%	1,101	88	7.98%	23.50%	24.00%
\$250,000	\$500,000	1,805	208	11.52%	462	54	11.69%	25.60%	25.96%
\$500,000	Total	2,682	646	24.09%	822	215	26.16%	30.65%	33.28%
		2,040,110	4,848	0.24%	31,459	832	2.64%	1.54%	17.16%

**Table 7 Assets of Corporations in 1990 By Size, AMT Status and 1118 Status  
(Billions of Dollars)**

Asset Size Class (000) Equal or Greater Than:	Less Than:	All Corporations				AMT Payers				AMT Incidence	
		Total	1118 Filers	1118 Filers /Total	Total	1118 Filers	1118 Filers /Total	All Corps.: AMT Payers /Total	1118 Filers: AMT Payers /Total		
\$0	\$100	31.7	0.0	0.04%	0.0	0.0	0.00%	0.00%	0.00%		
\$100	\$250	61.4	0.0	0.05%	0.2	0.0	0.00%	0.29%	0.00%		
\$250	\$500	84.3	0.2	0.22%	0.9	0.0	4.25%	1.06%	20.21%		
\$500	\$1,000	116.1	0.3	0.30%	3.3	0.0	1.01%	2.81%	9.57%		
\$1,000	\$10,000	492.0	3.9	0.79%	48.0	0.6	1.18%	9.75%	14.56%		
\$10,000	\$50,000	559.1	17.0	3.05%	103.5	3.7	3.62%	18.52%	21.98%		
\$50,000	\$100,000	420.8	18.2	4.32%	95.2	4.4	4.62%	22.63%	24.16%		
\$100,000	\$250,000	728.5	58.6	8.04%	172.4	14.3	8.31%	23.67%	24.47%		
\$250,000	\$500,000	633.4	74.7	11.79%	162.5	19.5	12.03%	25.65%	26.17%		
\$500,000	Total	12,809.5	6,110.3	47.70%	5,736.3	3,290.0	57.35%	44.78%	53.84%		
	Total	15,936.8	6,283.2	39.43%	6,322.2	3,332.7	52.71%	39.67%	53.04%		

**Table 8 Foreign Source Income and Foreign Source Dividends (Except Deemed) of 1118 Filers by Asset Size Class and Tax Liability Class (Millions of Dollars)**

Asset Size Class (000) Equal or Greater Than:	Less Than:	Foreign Source Income of 1118 Filers					Foreign Source Income/Assets				
		All Corps.	Non-AMT Payers	AMT Payers			All Corps.	Non-AMT Payers	AMT Payers		
				Total	At 90% Limit	Other			Total	At 90% Limit	Other
\$0	\$50,000	967	524	443	386	57	4,50%	3,06%	10,10%	32,78%	1,76%
\$50,000	\$100,000	488	240	249	222	27	2,68%	1,74%	5,65%	12,44%	1,02%
\$100,000	\$250,000	1,664	1,148	516	420	97	2,84%	2,60%	3,60%	8,80%	1,01%
\$250,000	\$500,000	2,860	1,304	1,556	1,394	162	3,83%	2,37%	7,96%	17,21%	1,41%
\$0	\$500,000	5,979	3,216	2,763	2,422	341	3,46%	2,47%	6,48%	15,30%	1,27%
\$500,000	Total	82,423	35,556	46,867	16,968	29,899	1,35%	1,26%	1,42%	2,04%	1,22%
Total		88,402	38,772	49,630	19,390	30,240	1,41%	1,31%	1,49%	2,29%	1,22%
Asset Size Class (000)		Foreign Source Dividends (Except Deemed)					Foreign Source Dividends (Except Deemed)/Assets				
Equal or Greater Than:	Less Than:	All Corps.	Non-AMT Payers	AMT Payers			All Corps.	Non-AMT Payers	AMT Payers		
				Total	At 90% Limit	Other			Total	At 90% Limit	Other
\$0	\$50,000	346	97	249	141	107	6,48%	2,47%	17,68%	30,18%	11,44%
\$50,000	\$100,000	145	57	89	58	30	2,42%	1,34%	4,92%	6,28%	3,47%
\$100,000	\$250,000	530	327	202	158	44	2,15%	1,77%	0,00%	5,62%	1,33%
\$250,000	\$500,000	1,300	620	681	563	118	3,45%	2,18%	7,33%	12,01%	2,55%
\$0	\$500,000	2,320	1,100	1,220	921	299	3,15%	2,00%	6,55%	10,34%	3,08%
\$500,000	Total	36,463	17,618	18,845	9,603	9,242	0,75%	0,83%	0,68%	1,18%	0,47%
Total		38,784	18,719	20,065	10,524	9,541	0,78%	0,86%	0,72%	1,28%	0,49%

Table 9 Foreign Tax Credit Position of 1118 Filers in 1990  
 (Counts in Units and Percentages of Total 1118 Filers)

Position for Regular Taxes:

	Excess Limit	Excess Credit		Total
		No Regular Taxes	Regular Taxes	
No AMT Liability	1,743 35.95%	366 7.55%	1,908 39.36%	4,017
Excess Limit	120 2.48%	28 0.58%	0 0.00%	148
At 90% Limit	12 0.25%	114 2.35%	42 0.87%	168
Excess Credit	60 1.24%	112 2.31%	343 7.08%	515
Total	1,935	620	2,293	4,848

Position For  
 Alternative  
 Minimum  
 Tax (AMT):