# *ITPF Member Meeting*

September 27-28, 2012


**The St. Regis Hotel**
**Astor Ballroom**
**16th & K Streets, NW**
**Washington, D.C.**
**202-638-2626**

International Tax Policy Forum

**ITPF Member Meeting**
**September 27-28, 2012**

Table of Contents

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**The St. Regis Hotel**
**923 16th Street, NW (at K Street)**
**Washington D.C., DC 20006**
**(202) 638-2626**

Agenda

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| **Thursday, September 27** | |
| 6:00 p.m. | Cocktail hour |
| 7:00 p.m. | Dinner<br>Commemoration of ITPF's 20th anniversary |
| 8:15 p.m. | Introduction: **Will Morris**, GE<br>Speaker: **David Gauke** (Exchequer Secretary to the UK Treasury) |
| 9:00 p.m. | Adjourn |
| **Friday, September 28** | |
| 7:30 a.m. | Breakfast |
| 8:00 a.m. | *Distributing the Corporate Income Tax: Revised U.S. Treasury Methodology*<br>**Laura Power** (U.S. Treasury Dept.) |
| 8:45 am | *Foreign Taxes and the Growing Share of U.S. Multinational Company Income Abroad: Profits, Not Sales, are Being Globalized*<br>**Harry Grubert** (U.S. Treasury Dept.) |
| 9:15 am | *Fixing the System: An Analysis of Alternative Proposals for the Reform of International Tax*<br>**Rosanne Altshuler** (Rutgers) and **Harry Grubert** (U.S. Treasury Dept.) |
| 10:00 a.m. | Break |
| 10:15 a.m. | *Summary of Recent Economic Research*<br>**James Hines** (University of Michigan) |
| 10:45 am | *European Tax Policy Forum Research Program Update*<br>**Michael Devereux** (Oxford) |
| 11:15 a.m. | *The X Tax: The Progressive Consumption Tax America Needs?*<br>**Alan Viard (AEI)** |
| 12:00 p.m. | *ITPF Research and Education Program*<br>**Peter Merrill** (PwC) and **James Hines** (University of Michigan) |
| 12:15 p.m. | Luncheon<br>Speaker: **Patrick Driessen** (Joint Committee on Taxation, retired)<br>Topic: Revenue Estimating Context for Territorial Proposals |
| 1:30 p.m. | Adjourn |

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# Distributing the Corporate Income Tax: Revised U.S. Treasury Methodology

Julie-Anne Cronin, Emily Y. Lin, Laura Power, and Michael Cooper

# DISTRIBUTING THE CORPORATE INCOME TAX: REVISED U.S. TREASURY METHODOLOGY

May 17, 2012

Julie Anne Cronin, Emily Y. Lin, Laura Power, and Michael Cooper

*The purpose of this analysis is to improve the U.S. Treasury Department's distributional model and methodology by defining new model parameters. We compute the percentage of capital income attributable to normal versus supernormal return, the percentage of normal return attributable to a cash flow tax versus a "burdensome" capital tax, and the portion of the burdensome tax on normal return to capital to distribute to capital income versus to labor income. In summary, 82% of the corporate income tax burden is distributed to capital income and 18% is distributed to labor income.*

*Keywords: distributional analysis, corporate tax incidence*

*JEL Codes: H22, H25, D39*

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In 2008, the Office of Tax Analysis (OTA), U.S. Department of the Treasury revised its incidence assumption for the corporate income tax. Prior to 2008, OTA assumed the corporate income tax was borne entirely by all (positive) capital income.[1] Currently, OTA assumes the share of the corporate income tax that represents a tax on supernormal returns is borne by supernormal capital income; the share of the corporate income tax that represents cash flow has no burden in the long run; and the remainder of the corporate income tax is borne equally by labor and positive normal capital income. In the final analysis the new methodology assumes 82 percent of the corporate tax burden is borne by supernormal or normal capital income and 18 percent is borne by labor.[2]

The change in distribution methodology was motivated by the desire to incorporate some of the more recent findings in the literature and to give Treasury the ability to more accurately capture the distributional effects of the existing tax system, which is a hybrid tax system that has features of a true income tax and of a consumption tax. Section I of this paper briefly reviews the literature. Section II summarizes the distribution assumptions of other tax policy offices. Section III gives a general description of our revised methodology. Section IV describes in detail how we used Treasury's Corporate Tax Model to measure the share of tax borne by supernormal returns and Section V describes how we used Treasury's Depreciation Model to measure the share of the corporate income tax that is not a burden in the long run. Section VI shows how the new assumptions affect the distribution of the corporate income tax, the distribution of certain proposed changes to the corporate income tax, and the distribution of all

1 Treasury had maintained this assumption since 1990, although some earlier Treasury studies took a shorter run view and distributed the corporate income tax to corporate shareholders.
2 The percentages used from 2008 through 2011 were 76 percent to normal or supernormal capital income and 24 percent to labor. These percentages were based on estimates by Gentry and Hubbard (1996) and Randolph (2006). Beginning with the 2012 model year, these percentages will be modified to reflect the findings presented in this paper.

federal taxes in general.

## I. LITERATURE REVIEW

Harberger (1962) develops a general equilibrium model of corporate tax incidence where the economy is assumed to be closed and have two sectors, corporate and non-corporate. His analysis shows that, under certain assumptions, a tax increase on the return to corporate capital would be borne entirely by all owners of capital, including non-corporate capital. In equilibrium, the after-tax return to capital must be the same in the two sectors. Following this work, research has extended Harberger's model and modified its assumptions to draw additional conclusions about corporate tax incidence. Depending on the time frame and assumptions under consideration, some studies conclude that the incidence falls more narrowly on corporate capital whereas some studies show that the incidence falls more broadly beyond capital. Auerbach (2005) and Gravelle (2010) provide reviews of these studies.

As indicated in Harberger's model, the answer to the question of who bears the corporate tax incidence differs between the long run and the transition period. A corporate tax increase initially lowers the after-tax return to corporate capital, thereby reducing asset values through capitalization. In response, capital moves from the corporate to the non-corporate sector, reducing the pre-tax return to non-corporate capital. As capital flows take place, the corporate tax burden is shifted to non-corporate capital over time through reductions in the return to non-corporate capital until after tax returns in both sectors are the same. As such, the tax burden initially falls on current owners of corporate capital and then on future investors of corporate and non-corporate capital. Auerbach (2005) points out that this different timing of incidence has generational distribution implications because the change in asset values is felt instantly by older

asset holders who have shorter planning horizons whereas the future change in the rate of returns will matter more for younger individuals who have not accumulated much wealth.

Another factor affecting the corporate tax incidence is investment and capital cost recovery provisions. The Harberger model assumes that the corporate income tax is imposed on economic income generated by corporate capital. In the presence of investment provisions such as accelerated depreciation, the corporate tax base deviates from economic income, resulting in a layer of corporate tax incidence not considered in the Harberger model. Auerbach (1983) shows that, because of the investment provisions, changes in corporate tax rates would alter the relative value of existing to new capital. This "surcharge" on existing assets imposes an additional piece of corporate tax incidence borne by existing shareholders during the transition period.

One critical assumption in Harberger's model is that the economy is closed. If capital owners have the ability to move capital abroad and escape the corporate tax increase, some burden of the higher tax will fall on domestic labor, which is assumed to be relatively immobile, through reductions in wages. The extent to which the burden is shifted to domestic labor depends on several factors. First, the less mobile the capital is across borders, the less burden is shifted to domestic labor as there will be less decline in the demand for domestic labor. Grubert and Mutti (1985) provide a simulation model demonstrating this relationship. In addition, the size of the U.S. capital stock relative to the rest of the world matters. As the United States is a large country, outflow of capital would lower the worldwide rate of return. This suggests that domestic capital cannot escape the corporate tax incidence entirely, leaving a smaller share of burden borne by domestic labor.

In the context of an open economy, the share of the corporate tax incidence borne by domestic labor depends also on the substitutability of the tradable goods and the degree to which

the tradable goods are corporate capital intensive. If the tradable good is corporate capital intensive and there is perfect product substitution, then the incidence would fall relatively more on domestic labor as domestic capital can flow abroad to escape the tax. Randolph (2006) calibrates the effects with a simulation model where various assumptions are made about country size and the degree of capital intensity of corporate sectors. Gravelle and Smetters (2006) show that, in the long run, the extent to which the burden falls on domestic labor declines as foreign and domestic goods become imperfect substitutes.

Another factor not considered in the Harberger model is the type of return. Because the model assumes no risk and assumes competitive markets, it applies if capital earns a normal rate of return. Since the real, normal rate of return to capital is close to zero, Gordon (1985) suggests that the corporate income tax imposes little burden because the revenue collected reflects only the expected returns to risk. However, given that the corporate tax revenue is always positive, risk returns cannot be the only reason for the revenue collected. Depreciation allowances and limited loss offsets both contribute to explaining the positive tax revenue. Positive corporate tax revenues can also be a result of economic rents. Auerbach (2005) describes how the corporate tax incidence varies with the source of rents. In some cases the entire burden falls on corporate capital whereas in other cases the standard Harberger analysis applies.

Different types of returns to capital suggest that the corporate income tax revenue could be decomposed into one portion that is imposed on excess returns and the other portion on normal returns. Because normal returns to capital are exempt from tax under a consumption tax, several studies estimate the share of the corporate tax revenue attributable to normal returns to analyze the effect of switching from the current tax system to a consumption tax system. Gordon and Slemrod (1988), Gordon et al. (2004a), and Gordon et al. (2004b) estimate the effect of

replacing the corporate income tax with a modified cash flow tax and find the revenue change sensitive to tax law and economic conditions. Toder and Rueben (2005) subsequently estimate the revenue effect of switching to expensing and find that the new tax base is equal to 68 percent of the corporate tax system in 2004, implying that normal returns are roughly 32 percent of all corporate returns. Using stock market data, Gentry and Hubbard (1996) estimate that a substantial portion – about 60 percent – of the return to corporate capital is in excess of the normal return.

## II. ASSUMPTIONS BY OTHER TAX POLICY GROUPS

Government agencies and policy analysts have used different incidence assumptions to distribute corporate income taxes. From 1990 to 2008 Treasury assumed that the corporate income tax was born by all (positive) capital income. Cronin (1999) describes Treasury's distributional analysis methodology and Nunns (1995) illustrates the methodology with a distribution of the Omnibus Budget Reconciliation Act of 1993 (OBRA93). Since 1996 the Congressional Budget Office (CBO) has allocated the corporate income tax burden to capital income. The methodology is documented in several CBO papers and studies (1996, 1998, 2000, and 2011). From 1990 to 1995, CBO generally allocated half of the corporate income tax burden to labor income and half to capital income and this methodology was described in Kasten, Sammartino and Toder (1994). In its original tax burden study and its update, CBO (1987 and 1988) allocated the corporate tax burden in two ways, one in proportion to capital income and one in proportion to total labor compensation. The Joint Committee on Taxation has not distributed the corporate income tax since 1995 due to the uncertainty concerning the incidence of the tax. In distribution tables released for OBRA93 and its study, JCT (1993) distributed the

burden to owners of corporate capital. The Urban-Brookings Tax Policy Center (TPC) has produced distribution tables since 2003 and during that time has allocated the corporate income tax to capital income. Browning and Johnson (1979) and Gale et al. (1996) allocate the corporate income tax to capital income, but show an alternative distribution where the tax is allocated to half labor and half capital income. Pechman (1987) assumes that the burden of the corporate income tax is borne by capital income.

## III. GENERAL DESCRIPTION OF NEW METHODOLOGY

Treasury's new methodology has the goal of improving upon our prior methodology. We wanted to be able to model elements of expensing as the current corporate income tax is not a pure income tax. For example, some assets in service under the current corporate income tax have benefitted from accelerated depreciation. We also wanted to differentiate among proposals that affected only supernormal returns, only normal returns, or both types of returns. Under the prior methodology, a $10 billion dollar increase in the corporate income tax whether it represented an increase in burden on rents or a decrease in depreciation deductions had the same distribution. Any revenue-neutral change in burdens did not change the distribution. Under the new methodology (as illustrated below), an increase in burdens due to a rate increase is not distributed the same as an increase in burdens due to a decrease in depreciation deductions. A change in rates would affect the normal return to capital, labor and supernormal returns to capital while a change in depreciation deductions would only affect the normal return to capital and labor.

To improve our methodology, we have incorporated some of the findings in the literature including the observation that supernormal returns are taxed under a consumption tax while

normal returns are not and that labor may share some part of the burden of the corporate income tax. We have not attempted to account for all possible incidences regarding the corporate income tax. For example, some part of the U.S. corporate income tax may be exported to foreign labor or capital held by families not included in our tables but we do not take this into consideration. Our tables also focus on the long run incidence. We have not considered the short-run incidence or incidence in the transition from the short run to the long run.

**A. Methodology**

63 percent of the corporate tax is a burden on supernormal capital income: As described in Section IV, we find that 63 percent of current corporate taxable income is due to supernormal returns. We distribute this share to corporate supernormal capital income.

Whether non-corporate returns also bear the burden of the tax on the supernormal return depends on the source of the supernormal returns (see Auerbach 2005). If the source of supernormal returns is rent, then the burden is only borne by corporate capital because pure economic rents in a competitive market do not respond to taxation. In contrast, if the source of supernormal returns is risk (without a full loss offset), the burden would be borne by both non-corporate and corporate capital. We assume the source of the supernormal return is pure rent, not risk, and distribute the entire supernormal burden to supernormal corporate capital income.

1 percent of the corporate tax is not a burden: As described in Section V, of the remaining 37 percent of the corporate tax on the taxable income attributable to normal returns, we find that 3 percent (1 percent of total corporate tax) is not a burden. The investments that produced the taxable income were allowed favorable treatment in the year that they were put into service and

tax collected in the current year is just a cash flow tax. The present value of the tax savings arising from the favorable treatment offsets the present value of the tax collected on the normal return to the investment over its lifetime. We do not distribute this small portion of the corporate income tax. The portion of the corporate income tax which is not a burden changes for different capital cost recovery proposals. We compute the change in cash flow versus burden associated with each capital cost recovery proposal, and only distribute the burden portion of the change.

36 percent of the corporate tax is a burden on normal capital income and labor: The remainder of the corporate tax on the normal return to capital is distributed equally to normal capital income and labor income. The open economy results of Randolph (2006), using factor shares and output shares for the U.S. economy, suggest that domestic labor bears as much as 70 percent of the long run burden of the corporate income tax. Gravelle and Smetters (2006) and Gentry (2007) both review the open economy results of Randolph. Allowing for imperfect product substitution, Gravelle and Smetters (2006) find a much smaller percentage being borne by labor, while Gentry (2007) argues for a more substantial burden remaining on labor. Without a conclusive answer, we have chosen an assumption that recognizes that some portion of the corporate tax may be on labor, even though the overall share borne by labor is relatively small when considering both the normal and supernormal return.

The end result is that our revised methodology assigns 82 percent of the burden of the corporate income tax to capital, either normal or supernormal, and 18 percent to labor.[3]

3 In earlier versions of the same modeling approach, we assumed that 76 percent of the burden of the corporate income tax was on capital and 24 percent was on labor. The resulting distributions however are virtually unchanged because the earlier version had a lower percentage of the burden on supernormal capital income. This paper replaces these assumptions with estimates from our model.

## IV. ESTIMATING THE PERCENTAGE OF THE TAX BASE ATTRIBUTABLE TO NORMAL RETURNS

The first step of the new corporate distributional methodology is to identify the portion of corporate liability attributable to normal versus supernormal returns. Supernormal returns arguably accrue to supernormal capital owners and so ought appropriately to be distributed solely to them, while normal return accrues to both capital and labor.[4] Thus, we want to separate the percentage of corporate liability attributable to each of these types of returns so that they can be distributed appropriately.

In equilibrium, the present value of the normal return over the life of the investment is just equal to the cost of the investment. If the cost is expensed then the present value of the tax savings due to expensing offsets the present value of the tax collected on the normal return over the life of the investment. In contrast, income in excess of the normal return (the supernormal return) will still bear a burden. This fact can be used to identify the portion of the current law corporate tax base attributable to the normal return to capital. This percentage has been estimated to be 40 percent by Gentry and Hubbard (1996) using stock market data and 32 percent by Toder and Rueben (2005) using aggregate tax data.

Gentry and Hubbard (1996) compare an average historical stock market rate of return of 16.5 percent (grossed up to 22 percent to reflect corporate taxes paid) to a riskless rate of return on bonds of 10 percent and conclude that a substantial portion of the return to equity is "supernormal." They use 60 percent. Toder and Rueben (2005) modify the approach of Gordon et al. (2004a and 2004b). They use estimates of aggregate 2004 data to adjust the current law corporate tax base. They remove all financial income from the tax base, and convert the

4 By definition the supernormal return is the return in excess of the risk free rate of return, and in practice it has been measured (e.g., Gentry and Hubbard (1996)) based on the return available in the stock market.

corporate tax base from one which includes depreciation (and capitalization) of assets (and inventories) to one which includes expensing. They attribute the change in the tax base to the normal return to capital, and conclude that, based on the percentage change in the tax base, 32 percent of current law corporate income is attributable to the normal return to capital. They effectively proxy the elimination of the tax on the normal return to capital with the elimination of taxes on capital and inventories (that is, with a move from depreciation and amortization[5] to expensing).

We use the Toder and Rueben approach as a starting point for our own estimate, but we modify their approach in several respects. First, we conduct much of the analysis at the micro level using the Treasury Department's corporate tax micro-simulation model (CTM). The corporate tax model extrapolates the detailed 2007 tax return data of over 1.8 million C corporations in order to forecast baseline corporate tax receipts over the 10-year budget window (2013-2022); as well as to estimate how changes in tax policy affect corporate tax receipts. The model also contains some historical corporate tax return data (2001-2006). The remainder of the analysis is conducted using detailed aggregate corporate tax return data for nonfinancial corporations. Second, we use multiple years of actual data rather than 2004 estimated data. Third, we assume the steady-state capital cost recovery policy does not include 50 percent bonus depreciation for equipment, which was available to taxpayers in 2004 and which Toder and Rueben assumed would be permanent in a steady state. Fourth, we do not make an adjustment for a move from depletion to expensing due to limited data. Fifth, we remove total dividends (not only domestic dividends) from the baseline tax base.[6] Finally, we compare the change in

5 Amortization is a type of capital cost recovery which is frequently less generous than the Modified Accelerated Cost Recovery (MACRS) depreciation system, and which is used primarily for intangible assets.

6 The Gordon et al. data on which the Toder study is based only removes domestic dividends received from the tax base. This is because they do not change the tax treatment of foreign dividends in their simulations, and so they do

our base to the pre-expensing corporate tax base.

The Treasury's corporate tax model (CTM) contains a corporate level tax calculator which can compute corporate tax liabilities under current law, and also under alternative tax policy specifications, as well as compute the change in corporate net income, taxable income, deficits, and tax liabilities, resulting from any given change in tax policy. The model is particularly useful for determining how much of any change in the tax base accrues to taxable firms versus deficit firms. It is also useful for making additional micro-level adjustments such as "purging" the data of the impact of bonus depreciation. Bonus depreciation was enacted late in 2001 and continued into 2002, 2003, and 2004. From September 2001 through May 2003 the tax code provided 30 percent expensing of equipment investment and between May 2003 and December 2004 it provided 50 percent equipment expensing.[7] It is arguably difficult to analyze the percentage of the tax base attributable to the normal return to capital during bonus depreciation years because the capital cost recovery system (which largely determines the taxation of the normal return to capital) during these years is so different from our "standard" capital cost recovery system (modified accelerated cost recovery system (MACRS)), and because these tax law changes imply that the system is obviously not in a "steady state." We use the CTM to make adjustments to remove the impact of bonus depreciation and thus to construct a proxy for a "steady state" without bonus depreciation. Further, we compute the percentage of the tax base attributable to the normal return to capital in years in which there was no bonus depreciation.

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not remove them from the tax base. However, for our purposes, the appropriate tax base measure is taxable income net of total dividends, i.e., domestic and foreign dividends, and so our dividend adjustment is substantially larger than Gordon et al.

7 There was no bonus depreciation in 2005, 2006, and 2007, but it was reinstated for 2008 and has been extended since that time, currently through 2012. From January 2008 through the beginning of September 2010, the tax code provided 50 percent bonus depreciation for equipment. From September 2010 through December 2011, it provided 100 percent bonus depreciation for equipment. Bonus depreciation for 2012 is 50 percent for equipment.

Like Toder and Rueben, the baseline against which we conduct the analysis is the income base associated with real assets, or an R base.[8] In order to construct the R base, we remove interest received, dividends received, and net capital gains from each nonfinancial corporate taxpayer's total income (reported on their annual Form 1120 tax return), and we add back their interest paid deduction. These steps are detailed in Table 1. Note that in all years, for nonfinancial corporations, interest paid exceeds interest received (nonfinancial corporations are net borrowers), and in all years except the recession year, the deduction associated with net interest is less than dividend and capital gain income. This implies that, in all years except the recession year, the adjustment to convert taxable income to an R base is negative; the R base is smaller than the taxable income base.

Our analyses include the years 1999, 2000, 2001, 2004, and 2007. For 2004 and 2007, the CTM is used to estimate the changes in the corporate tax base associated with expensing of inventories, investment, and intangibles, as well as to construct the R base as described above. For reasons described above, the data are also adjusted to remove the impact of bonus depreciation.[9] Aggregate data analyses using totals of nonfinancial tax return data were used for

8 See Gordon et al. for a discussion of R base.

9 In particular, for 2004, the bonus depreciation deduction was replaced with MACRS depreciation for bonus property. Then prior year deductions were increased by roughly 15% to reflect the fact that prior year deductions are lower than they would have been in the absence of bonus depreciation (because some 2001, 2002, and 2003 investment was already expensed). The 15% adjustment was derived by assuming all bonus depreciation property is 7 year property (midpoint of MACRS equipment distribution) and then computing the "missing" depreciation deductions by multiplying the bonus depreciation amount by the 7 year deduction percentage implied for 2004 for the bonus vintages. The true distribution of bonus depreciation by MACRS class is not known and therefore the adjustment is rough. It results in an approximately $50 billion increase in prior year deductions which could be too low if more bonus depreciation property is 5 year property and too high if more bonus depreciation property is longer lived. For 2007, prior year deductions were increased by roughly 8% adjustment to reflect the fact that prior year deductions are lower than they would have been in the absence of bonus depreciation (because some 2001, 2002, 2003, and 2004 investment was already expensed). The 8% was derived by assuming all bonus depreciation property is 7 year property (midpoint of MACRS equipment distribution) and then computing the "missing" depreciation deductions by multiplying the bonus depreciation amount by the 7 year deduction percentage implied in 2007 for the bonus depreciation vintages. The true distribution of bonus depreciation by MACRS class is not known and therefore the adjustment is rough. It results in an approximately $30 billion increase in prior year deductions, which could be over-stated or under-stated if property is shorter or longer lived than is assumed.

## Table 1

The Percentage of the Tax Base Attributable to the Normal Return to Capital, and the Steps Necessary to Estimate It

(Estimated Using Tax Return Data of Nonfinancial Corporations)

| | 1999 | 2000 | 2001 | 2004 | 2007 | AVERAGE |
|---|---|---|---|---|---|---|
| Current Law Cost of Goods Sold | 7,069,199 | 7,996,933 | 7,884,327 | 8,602,716 | 10,591,838 | 8,429,003 |
| Expensing of Purchases | 7,120,279 | 8,106,781 | 7,845,599 | 8,692,201 | 10,642,781 | 8,481,528 |
| *Change in Deductions associated with Inventories* | *51,080* | *109,849* | *-38,729* | *89,484* | *50,943* | *52,526* |
| Current Law Depreciation Deductions | 456,674 | 477,928 | 501,413 | 478,749 | * 494,173 | * 481,788 |
| Expensing of Investment | 590,454 | 608,058 | 594,414 | 560,498 | 684,405 | 607,566 |
| *Change in Capital Cost Recovery Deductions* | *133,780* | *130,129* | *105,037* | *81,749* | *190,232* | *125,778* |
| *Change in Deductions Associated with the Expensing of Section 197 Intangibles* | *25,096* | *29,057* | *22,090* | *19,863* | *39,090* | *27,039* |
| *Total Change in Deductions Associated with Full Expensing of Investment, Inventories, and Intangibles* | *209,956* | *269,035* | *76,362* | *191,096* | *280,265* | *205,343* |
| Changes Required To Construct an "R" Base | | | | | | |
| Eliminate Net Interest (add back absolute value) | -185,246 | -213,539 | -214,542 | -169,399 | -246,335 | -205,812 |
| Eliminate Net Gains (subtract) | 108,544 | 126,028 | 83,645 | 67,325 | 116,572 | 100,423 |
| Eliminate Total Dividends (subtract) | 119,932 | 124,515 | 111,146 | 137,596 | 186,657 | 135,969 |
| Total Change in the Tax Base: Current Law to R Base | -43,229 | -37,003 | 19,750 | -35,522 | -56,894 | -30,580 |
| Net Income (R Base) | 336,040 | 301,754 | 141,613 | 439,551 | 711,290 | |
| *Change in Net Income due to Expensing (R Base)* | | | | *-191,096* | *-280,265* | |
| Taxable Income (R Base) | 478,283 | 522,674 | 463,333 | 529,289 | 779,121 | 554,540 |
| *Change in Taxable Income due to Expensing (R Base)* | | | | *-65,927* | *-98,687* | |
| Net Operating Loss Deduction (R Base) | | | | 117,189 | 136,994 | |
| Deficits (R Base) | | | | -228,491 | -210,860 | |
| *Change in Deficits (R Base)* | | | | *-122,903* | *-173,976* | |
| Percentage of the Tax Base Attributable to the Normal Return to Capital | 0.439 | 0.515 | 0.165 | 0.361 | 0.360 | **0.370** |

* These values have been adjusted to remove the impact of bonus depreciation. See text for full description.

1999-2001. 1999 and 2000 were chosen in order to analyze periods completely free of bonus depreciation. 2001 was chosen to analyze the tax on the normal return to capital during a recession year. Aggregate analyses were used because it is somewhat cumbersome to adapt the model to historical years, and in years without bonus depreciation the aggregate data suffice.[10]

For each of these years, we identify (either using the CTM or aggregate data) the change in the corporate tax base resulting from a change from depreciation and amortization of intangible capital, tangible capital, and inventories, to expensing. We replace the current law value of deductions for all MACRS classes (including the bonus adjustment), for section 197 intangibles (which are acquired intangibles that include goodwill, workforce in place, patents, copyrights, licenses, permits, franchises, trademarks, customer-based intangibles, and supplier-based intangibles), for software, and for the cost of goods sold deduction which are reported on the corporate tax return with their expensing value; that is, with the level of investment associated with these deductions.[11] As noted above, we do not make an adjustment to the

10 Bonus depreciation was enacted at the end of 2001, and therefore there was a small amount of equipment expensing associated with bonus depreciation in 2001. We make an adjustment to remove bonus depreciation at the aggregate level by decreasing deductions associated with bonus depreciation by 85% (using the 7 year MACRS class first year deduction as representative). We do not use the CTM to reallocate bonus depreciation in 2001 because bonus depreciation in 2001 is much less significant than in 2004 (the 2001 bonus depreciation is about 15% of the 2004 value).

11 Taxpayers are required to report the investment amount associated with their tangible capital depreciation deductions. Sometimes taxpayers fail to report the actual investment level but only report the deduction. In these cases, we back out the investment amount from the deduction amount. To proxy the value of software investment to be expensed we use the total reported software deductions across all investment vintages. Note that this is a conservative estimate because it assumes no growth. For intangible investment, we gross up reported current year vintage section 197 intangible amortization by 15 (since intangibles are amortized over 15 years) to estimate the investment amount associated with 197 intangibles which is to be expensed. Note that this estimate of intangible expensing is conservative because it assumes only section 197 intangibles receive expensing and the gross up factor is conservative (one could argue that a factor as high as 30 should be used if intangible property is placed in service evenly throughout the year). Finally, we do not change the treatment of certain types of capital, including tax exempt use property, foreign use property, listed property, motion picture, sound, and video recording property, and section 168 property. Section 179 expensing deductions and the minor amount of bonus depreciation reported in 2007 are assumed permanent. For inventories, we replace the current year COGS deduction with the reported value of current year purchases, cost of labor, section 263a costs, and all other relevant costs. Finally, as discussed more thoroughly in Gordon et al. (2004), the elimination of taxation on the normal return to capital can be proxied either by expensing new capital investment and removing all gains and losses associated with the disposition of tangible property from the tax base *or* by expensing both new and used capital and including the gains and losses from

depletion deduction, since current law depletion laws are complex and our data do not allow us to accurately estimate investment bases associated with depletion deductions.[12] However, the depletion deduction is very small relative to total depreciation thus leaving it unchanged is not likely to substantially affect the results. The change in the tax base resulting from expensing of tangible capital, intangible capital, and inventories, and also from the change to an R base, are also reported in Table 1.

On average across all years in the analysis, the tax base net of financial income and including expensing is about 37 percent of the baseline tax base.[13] This implies that 37 percent of our current corporate tax base is attributable to the normal return to capital, which is roughly in line with other estimates. This percentage varies considerably by year, and is substantially lower during the recession year (2001). The impact of inventory expensing is somewhat smaller than that of the expensing of capital, though it is even more volatile.[14] It is largely the negative impact of inventory expensing during the recession that causes the percentage of taxable income attributable to the normal return to capital during the recession year to be so small. The negative value reflects the fact that inventories are drawn down during a recession, and hence, expensing

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tangible property disposition in the tax base. We chose the latter strategy.

12 Depletion is a method of depreciating property which is widely applicable in the oil and gas and mining industries. Under current law, the majority of corporations in these industries that take depletion deductions use percentage depletion, which allows the company to deduct a percentage of its gross receipts as a proxy for its depletion expense. The deduction can be taken even if the company no longer has basis in the mine or oil well. Thus, in principle, percentage depletion could be even more generous than expensing. Only the largest firms use cost depletion, which is analogous to economic depreciation. Given that there are two very different depletion methods not separated in the data, and the additional complication that firms can and do switch between cost and percentage depletion (depending on which is more advantageous), there is no accurate way to estimate the change that would occur under a system that allowed expensing. However, total depletion deductions are small in comparison to total tangible capital and therefore we hope that ignoring depletion will not meaningfully distort the results.

13 This average is computed by averaging the baseline and proposed law values for all relevant variables, then computing the changes associated with these averages, and finally computing the ratio of the total change to the average of the taxable income bases. The average is obviously designed to smooth any anomalies in the data.

14 The current cost of goods sold deduction allows firms to write off expenses associated with merchandise which is sold in the current year, but requires firms to capitalize expenditures associated with inventories. Expensing of inventories essentially means that all current year purchases are expensed, regardless of whether these purchases are used to produce goods for sale or inventory.

is actually inferior to the cost of goods sold deduction during a recession.[15] The impact of inventory expensing in other years varies somewhat, and on average, about a quarter of the tax on the normal return to capital is attributable to inventory capitalization.

The change from depreciation to expensing of investment also varies by year, though not in a predictable fashion. This time period is a particularly challenging one in which to analyze the impact of changes in capital cost recovery policy. In addition to the existence of bonus depreciation, investment in the U.S. economy fell in 2002 and again in 2003, and barely began to recover in 2004. As can be seen in Table 2, it then grew rapidly from 2004 to 2007 and beyond. This investment pattern in part explains why the 2004 change from depreciation to expensing seems low compared to other years, while the 2007 change appears somewhat high. That having been said, the adjustments to remove bonus depreciation are by their nature imperfect so it is possible that this imperfection distorts somewhat the 2004 and 2007 values. We performed sensitivity testing in which we increased/decreased the prior year deductions by different percentages. Within a reasonable range of prior year deduction values, these sensitivity tests increased/decreased the percentage of the tax base attributable to the normal return to capital by a few percentage points in either direction.

The expensing of section 197 intangibles has a smaller impact in the total change from depreciation to expensing, which implies that amortization of intangibles contributes modestly to the taxation of the normal return to capital. Typically section 197 intangibles are amortized over

15 We also compute the percentage of the tax base attributable to normal capital (and a new average) assuming that inventory expensing is equal to the cost of goods sold deduction in a recession. As shown in the table, this raises both percentages somewhat.

**Table 2**

Corporate Sector Investment and Depreciation: 2001 – 2008

| YEAR | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|---|
| Total Corporate Investment | 636,987 | 547,932 | 516,418 | 543,485 | 578,873 | 635,353 | 682,773 | 685,021 |
| Corporate Depreciation | 531,624 | 586,496 | 585,637 | 583,988 | 457,452 | 503,623 | 542,737 | 680,383 |
| Corporate Expensing | 25,031 | 90,395 | 123,214 | 149,856 | 8,618 | 9,114 | 10,238 | 143,616 |

Estimates from Treasury's Depreciation Model. Original data source BEA historical cost investment, altered to be consistent with taxable capital.

15 years, so a change to expensing represent a significant change in their capital cost recovery, but they continue to represent a fairly small portion of the capital base, so the overall impact is not too large. There are other types of amortizable intangibles, but their treatment was left unchanged either because they were too small to matter or because we were unable to identify the type of amortizable and/or the amortization period, and therefore could not compute a change.

As mentioned previously, on average, the normal return to capital represents about 37 percent of the taxable income base. This percentage varies considerably from a low of 16.5 percent during the recession to a high of 51 percent in the year 2000. However, it is worth mentioning that this analysis implicitly assumes that all of the change in the move from depreciation to expense accrues to taxable income. In fact, as can be seen from the decomposition of the change into the portion attributable to taxable firms and the portion attributable to deficit firms provided by the CTM and reported in Table 1, at least two thirds of the change from depreciation to expensing accrues to deficits. A study by Cooper and Knittel (2010) demonstrates that, in present value terms, on average, only 50 percent of the dollar value of deficits ever gets used to reduce taxable income. This loss of the value of the deficit implicitly represents an additional tax on the normal return to capital. It is worth considering how one

might take into account this additional tax on the normal return to capital in the estimates, to be certain that the appropriate portion of the current taxable income base attributable to the normal return to capital is identified.

## V. ESTIMATING THE SHARE OF THE CORPORATE TAX WHICH IS NOT A BURDEN

A country's capital cost recovery policy impacts the burden imposed by its corporate tax. A pure cash flow tax (imposed on the normal return to capital), which taxes total income minus total expenses in a given year, collects no tax on capital in present value terms. The deduction of the expenses represents a loan which the government provides the taxpayer for his investment, and the future tax revenue associated with that investment represents the repayment of that loan. By contrast, an income tax system does not allow immediate full expense deduction, so taxpayers lose the time value of money associated with the "extra" taxes which they must pay, and in this sense the tax system imposes a burden on capital. But in terms of tax revenue collected (in a steady state), these two different tax systems, which impose two very different burdens on taxpayers, appear similar.

Treasury's old distributional methodology viewed all corporate tax payments as being borne by some class of individuals. But for accurate distributional analysis, we want to identify and distribute only the portion of the corporate tax on capital which actually imposes burden, and also only distribute the change in burden associated with any capital cost recovery proposal. The portion of corporate liabilities which impose burden can be identified by computing the "burden revenue," that is, the revenue attributable to a tax on economic income at the true marginal effective tax, and then comparing that to actual revenue collected under the current income tax.

The ratio of these two amounts is the percentage of current taxes which impose burden, while one minus that ratio is the proportion of the tax which represents a cash flow tax.[16] We use Treasury's depreciation model (DM) to compute these ratios, as well as the intermediate steps required for their computation, for 80 different asset types (i.e., BEA Hulten Wykoff depreciation classes) with 8 different tax depreciation rates in four different tax sectors.

The depreciation model, which is based on the NIPA annual investment flow numbers, is a multi-vintage model designed to measure the effect on tax liabilities of changes in capital cost recovery law. This model forecasts current law depreciation deductions, as well as deductions associated with any proposed change in law, and then, with the help of the corporate tax micro-simulation model (CTM) and the individual tax model (ITM), it calculates the change in tax liabilities associated with the proposed changes. The model also has the capability to estimate economic depreciation using the same NIPA data, and these economic depreciation estimates are used in several of the computations required for the corporate distributional estimates. The ultimate goal of the distributional computations on the DM is twofold: first, to determine the percentage of baseline corporate tax receipts which represent a burden imposed by the tax system (versus a cash flow tax on the governments implicit loan to investors), and, second, to determine the changes in burden associated with various capital cost recovery proposals.

Table 3 summarizes each of the calculations made by the DM in arriving at the baseline corporate tax receipt percentages (the first goal of the analysis). The depreciation model computes each of the listed formulas at the asset – MACRS class – sector level. The rows of the table describe the intermediate steps required to compute the final output of the exercise – the percentage of corporate tax liability (on the normal return to capital) which constitutes a burden.

16 This methodology builds on the insights of Auerbach (1993, 1987) and JCT (1993), see the discussion of the current tax system as a hybrid between a pure income tax and a deduction for investment.

The aggregate burden percentage is obtained by computing the micro-level "burden revenue" and "actual revenue" amounts, summing them to the aggregate level, and dividing.[17] The percentage of the corporate tax on the normal return which imposes a burden – 97 percent according to our computations – is then applied to corporate tax receipts associated with the normal return to capital (i.e. excluding receipts associated with supernormal returns) to arrive at the amount of corporate tax receipts to be distributed. Thus the implied 3 percent of the normal return associated with a cash flow tax (which does not impose burden) is not distributed.

When estimating changes in the burden associated with changes in capital cost recovery legislation (the second goal of the analysis), the objective is to determine the magnitude of the tax liability change to distribute. For short run analyses, we essentially calculate the annuity that provides the same present value as the tax savings from the proposal for 2013 investment. For our long run analyses, we also calculate the annuity that provides the same present value as the tax savings, but the tax savings over all investments.

We compute these values as follows. For the short run, we calculate the cost of capital by subtracting the economic depreciation rate from the user cost of capital ($\mu$-$\delta$) Then we calculate economic income by multiplying the cost of capital times the level of investment in 2013 (for the short run calculations). Then we multiply this pre-tax income by the marginal effective tax rate (METR)[18.] This is the short run current law burden amount. Holding pre-tax

17 Note this methodology provides the same answer as computing the burden percentage at the micro-level and then taking the weighted average of the micro-level percentages, using the share of actual taxes paid as the weight.
18 The marginal effective tax rate is the difference between the cost of capital and the required after-tax return divided by the cost of capital. It is the implied tax rate that would offer the same after-tax return as is offered by the existing tax code if it was applied to true economic income. Therefore, it takes into account features of the tax system such as depreciation rules.

## Table 3

Steps for Computing the Percentage of the Normal Return to Capital Attributable to a Cash Flow Tax

| Description of Variable | Source or Formula for Computation | Aggregate Values (Sum across asset types) |
|---|---|---|
| PV of tax depreciation, 2013 investment | $\Sigma_t\{[1/(1+i)]^t*(2013\ tax\ depreciation_t)\}$ , DM output | 767,488 |
| PV capital stock, 2013 | [1/( +r)]*(2013 investment ) | 7,730,357 |
| PV economic depreciation, 2013 investment | [ /(r+ )]*(2013 investment) | 655,271 |
| Computation of user cost of capital = μ: | numerator/denominator | 0.120 |
| Numerator | {(2013 Investment)-[u*(PV tax depreciation, 2013 vintage)]} | |
| denominator | {(1-u)*(PV capital stock, 2013)} | |
| PV after tax cash flow | first part +second part | 17,183 |
| first part | (PV capital stock, 2013)*(1-u)*μ | |
| second part | (PV tax depreciation, 2013)*u | |
| Total investment in 2013 | DM model output | 922,742 |
| Pre-Tax Return = PV(PTCF - Econ Deprec) | {pre-tax cash flow - (PV economic depreciation, 2013)} | |
| Pre-tax cash flow | PV capital stock, 2013*μ | |
| PV After tax income | PV after tax cash flow - PV economic depreciation, 2013 | |
| METR | (pre-tax return-after tax Income)/(pre-tax return) | 0.269 |
| Capital Stock = K | $\Sigma_{age}\ (1-)^{age}$ *(Investment$_{age}$ )*inflrt$^{age}$, DM output, across prior vintages in 2013 | 8,872,194 |
| CK -get from model in 2013 | μ*capital stock | 1,038,624 |
| DD = Tax Deprec Deductions | (depreciation deductions 2013), DM output = sum of tax depreciation deductions in 2013 for all prior vintages | 684,824 |
| Economic Depreciation =ED | $\Sigma_{age}\ ()*(1-)^{age}$ *(Investment$_{age}$)*inflrt$^{age}$, DM output, across prior vintages in 2013 | 555,468 |
| Estimated Tax Base | (CK-DD) | 353,800 |
| Estimated Taxes Paid | u*(CK-DD) | 123,830 |
| Estimated Burdensome Tax Base | (CK-ED) | 483,156 |
| Estimated Burdensome Taxes Paid | METR*(Ck-ED) | 120,352 |
| Cash flow percentage | 1=Burden Percentage | 0.03 |
| Burden percentage | Estimated Burdensome Taxes Paid/Estimated Taxes Paid | 0.97 |

Definitions

δ=economic depreciation rate (BEA's modified Hulten wykoff rates, which are asset specific); r = real interest rate (3.5%); i=nominal discount rate (value 5%); u=statutory tax rate; μ= user cost of capital; METR= marginal effective tax rate; inflrt = inflation rates, which are BEA asset specific rates.

Notes

All computations, including the METR, user cost, steady state capital stock, taxes paid, cash flow piece, and burden piece, are made for each unique economic depreciation rate - MACRS class - sector combination. Then the cash flow and burden percentages are aggregated to the sector level by computing the weighted average of the micro-level percentages, where the weights are micro-level taxes paid as a percentage of total taxes paid in the sector. There are 80 unique economic depreciation rates, 8 unique MACRS classes and 4 unique sectors.

income constant, we then multiply it by the new METR – i.e. the METR associated with the new capital cost recovery law to get proposed law short run burden. The difference is the magnitude of the tax liability change to be distributed.

For the long run analysis we calculate the cost of capital by subtracting the economic depreciation rate from the user cost of capital ($\mu$-$\delta$). We, then, calculate economic income by multiplying the cost of capital times the level of the capital stock in 2013. Finally, we multiply economic income by the METR. This is the long run current law burden amount. Holding economic income constant, we then multiply it by the *new* METR – i.e. the METR associated with the new capital cost recovery law to get "proposed law long-run burden." The difference is the magnitude of the tax liability change to be distributed. The percentage of corporate tax liability which constitutes a burden (as contrasted with the portion which constitutes a cash flow tax) will be different under different capital cost recovery systems. Our methodology will capture the change in burden from moving to alternative capital cost recovery systems.

## VI. DISTRIBUTION RESULTS

The distribution of the burden of the corporate income tax among families is dependent on each family's share of labor income, normal capital income and supernormal corporate capital income. Treasury uses cash income to measure a family's ability to pay and to group families into income classes. Cash income consists of wages and salaries, net income from a business or farm, taxable and tax-exempt interest, dividends, rental income, realized capital gains, cash transfers from the government, retirement benefits, and employer-provided health insurance. Employer contributions for payroll taxes and the federal corporate income tax are added to place cash income on a pre-tax basis. Treasury's measure of capital income is constrained to the

components of cash income so, for example, accrued but unrealized capital gains are not part of Treasury's measure of capital income.

Supernormal capital income is measured as 63 percent of positive realized capital gains, 63 percent of dividends, and 63 percent of the capital share of active income from closely held businesses. In Treasury's model, inside build-up in defined contribution pension plans is also assumed to be capital income and a small portion of this income is assumed to be supernormal. In total 10 percent of retirement distributions are assumed to be attributable to supernormal income.[19]

Normal capital income is measured as 37 percent of positive realized capital gains, 37 percent of dividends, 37 percent of the capital share of active income from closely held businesses, the capital share of passive income from closely held businesses, taxable and tax exempt interest, and 30 percent of retirement distributions.

Labor income is measured as wages and salaries, earnings from self-employment, employer-provided health insurance, 60 percent of retirement distributions, and employer contributions to payroll taxes.

Table 4 shows the distributions of income by source. As expected, a greater share of supernormal than normal capital income accrues to families in the top income quintile. Families in the top 1 percent of the income distribution receive 51.2 percent of corporate supernormal capital income, 64.3 percent of non-corporate supernormal capital income, and 45.6 percent of normal capital income. Yet, both shares are significantly higher end than the distribution of

19 Sixty percent of pension distributions are assumed to be labor income, 30 percent is assumed to be normal capital income and 10 percent is assumed to be supernormal capital income. All distributions from defined benefit plans are included as labor income. The share of distributions from defined contribution plans that represents labor compensation is included as labor income. Inside build-up on defined contribution plans is counted as capital income. The portfolios of defined contribution plans were considered to split accruals between normal and supernormal capital income.

labor income. Families in the top 1 percent of the income distribution receive "only" 11.5 percent of all labor income.

**Table 4**

Percent Distribution of Cash Income by Source

(2012 Income Levels)

| Family Cash Income Quintile | Family Cash Income | Transfer Income | Labor Income | Positive Capital Income | | | |
|---|---|---|---|---|---|---|---|
| | | | | Total | Normal | Supernormal - Corporate | Supernormal - Non-Corporate |
| Lowest | 2.3 | 9.9 | 1.9 | 0.8 | 0.9 | 0.9 | 0.3 |
| Second | 6.8 | 18.1 | 6.8 | 2.3 | 2.5 | 2.4 | 1.1 |
| Third | 11.8 | 22.2 | 12.4 | 5.2 | 5.9 | 5.1 | 2.2 |
| Fourth | 19.7 | 23.6 | 21.8 | 9.7 | 11.0 | 9.4 | 4.9 |
| Highest | 59.9 | 26.1 | 56.8 | 80.9 | 78.5 | 80.7 | 91.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Top 10 | 44.5 | 14.4 | 39.1 | 72.8 | 69.6 | 72.8 | 86.4 |
| Top 5 | 33.4 | 7.3 | 26.8 | 65.6 | 61.8 | 65.8 | 81.3 |
| Top 1 | 18.6 | 1.2 | 11.5 | 49.8 | 45.6 | 51.2 | 64.3 |

NOTE: Quintiles begin at cash income of: Second $18,094; Third $34,910; Fourth $57,714; Highest $99,912; Top 10% $145,011; Top 5% $205,697; and Top 1% $499,329.

Families with negative incomes are excluded from the lowest income quintile but included in the total line.

Table 5 shows the distribution of the corporate income tax under the new methodology (63 percent attributed to supernormal corporate capital income, 18 percent to normal capital income and 18 percent to labor), the prior methodology (100 percent to all capital income) and to an alternative distribution that assumes half the burden is borne by labor and half by capital.

**Table 5**

Percent Distribution of the Corporate Income Tax Under Alternate Assumptions

(2012 Income Levels)

| Family Cash Income Quintile | New Methodology | 100 % Positive Capital | 50 % Positive Capital & 50% Labor |
|---|---|---|---|
| Lowest | 1.1 | 0.8 | 1.4 |
| Second | 3.2 | 2.3 | 4.6 |
| Third | 6.6 | 5.2 | 8.8 |
| Fourth | 12.0 | 9.7 | 15.8 |
| Highest | 76.0 | 80.9 | 68.9 |
| Total | 100.0 | 100.0 | 100.0 |
| Top 10 | 66.1 | 72.8 | 56.0 |
| Top 5 | 58.0 | 65.6 | 46.2 |
| Top 1 | 43.0 | 49.8 | 30.6 |

A lower share of the corporate tax is borne by the highest income families under the new methodology than the prior methodology. Under the assumption that the tax is borne by all capital income, families in the top 1 percent of the income distribution bore 50 percent of the burden of the corporate income tax. Under the new methodology they bear 43 percent of the burden. The increase in progressivity from attributing a large portion of the tax to corporate supernormal income which accrues disproportionately to the highest income families is more than offset by the decrease in progressivity from attributing a small portion of the corporate income tax to labor which is less skewed to the high end. So that on net, the change is fairly small. The distribution under the assumption that half of the corporate tax burden is borne by labor and half is borne by capital income has the least progressive distribution.

Table 6 shows the distribution of all federal taxes under the same alternate assumptions shown in Table 5. The new methodology results in almost the same distribution as the prior methodology that assumed the burden was borne by all capital income. Even the distribution of all federal taxes that assumes that the corporate income tax is borne half by labor and half by capital income generally is only slightly lower end than the other two. The corporate income tax under 2012 current law (with an AMT patch) and projected income levels is only expected to be 14 percent of total Federal taxes. In contrast, Federal individual income taxes are expected to be 42 percent of the total federal burden and payroll taxes are expected to be 38 percent of the burden. The small weight of the corporate income tax combined with the fact that the alternate corporate distributions are all generally progressive results in very small differences when all federal taxes are considered.

One benefit of the new methodology lies in its ability to differentiate among proposals that affect the normal return and the supernormal return differently. Consider two proposals: 1) a decrease in the corporate rate; and 2) bonus depreciation. Under the prior methodology, both proposals would be treated the same. Under the new methodology, a change in the corporate rate would be distributed in proportion to the corporate tax burden. In contrast, changes in depreciation rules only affect the taxable normal return and hence the burden falls on normal capital and labor.

**Table 6**

Percent Distribution of All Federal Taxes Under Alternate Corporate Income Tax Assumption

(2012 Income Levels)

| Family Cash Income Quintile | New Methodology | 100 % Positive Capital | 50 % Positive Capital & 50% Labor |
|---|---|---|---|
| Lowest | 0.6 | 0.5 | 0.6 |
| Second | 2.8 | 2.7 | 3.0 |
| Third | 7.9 | 7.7 | 8.2 |
| Fourth | 17.2 | 16.9 | 17.8 |
| Highest | 71.2 | 71.9 | 70.2 |
| Total | 100.0 | 100.0 | 100.0 |
| Top 10 | 55.8 | 56.8 | 54.4 |
| Top 5 | 43.7 | 44.8 | 42.0 |
| Top 1 | 25.9 | 26.9 | 24.2 |

Note: The taxes included are individual and corporate income, payroll (Social Security, Medicare and unemployment), excises, customs duties, and estate and gift taxes. The individual income tax is assumed to be borne by payers, payroll taxes (employer and employee shares) by labor (wages and self-employment income), excises on purchases by individuals in proportion to relative consumption of the taxed good and proportionately by labor and capital income and excises on purchases by businesses and customs duties proportionately by labor and capital income, and the estate and gift taxes by decedents.

Table 7 shows the percent distribution of change from current law capital cost recovery rules to 50 percent bonus expensing under the new methodology. The distribution of the depreciation change is lower than a change in rates. Because the top 1 percent accrues a larger share of supernormal returns than normal returns, they benefit more from a rate cut (which reduces the burden on normal and supernormal returns) than bonus expensing (which only reduces the burden on normal returns). They receive 43.0 percent of the benefit of a rate cut but only 28.5 percent of the benefit of an increase in bonus expensing. So while the overall

distribution of the corporate income tax is not very different under the new methodology, the distributions of certain proposals will be very different.

**Table 7**

Percent Distribution of Proposed 50 Percent Bonus Expensing

(2012 Income Levels)

| Family Cash Income Quintile | Distribution of Burden on Normal Return (50% Normal Capital Income and 50% Labor) |
|---|---|
| Lowest | 1.4 |
| Second | 4.7 |
| Third | 9.1 |
| Fourth | 16.4 |
| Highest | 67.7 |
| Total | 100.0 |
| Top 10 | 54.4 |
| Top 5 | 44.3 |
| Top 1 | 28.5 |

## VII. CONCLUSION

The purpose of this analysis is to improve the Treasury distributional model and methodology by defining new, or redefining existing, model parameters. We surveyed the extensive literature on this topic and also performed our own computations in order to identify and estimate a) the percentage of capital income attributable to normal versus supernormal return (37 percent of the corporate tax versus 63 percent of the corporate tax), b) the percentage of

normal return attributable to a cash flow tax versus a "burdensome" capital tax (1 percent of the corporate tax versus 99 percent of the corporate tax), and c) the portion of the "burdensome" normal return to capital (36 percent of the corporate tax) to distribute to capital income versus to labor income (18 percent of the corporate tax versus 18 percent of the corporate tax). The end result is that our revised methodology assigns 82 percent of the burden of the corporate income tax to capital, either normal or supernormal, and 18 percent to labor. Accounting for these important, realistic factors in distributional analysis improves the accuracy of our estimates and provides greater flexibility and specificity in the distributional analysis. On the whole, these changes do not alter the current law baseline distribution substantially**,** relative to Treasury's prior distributional methodology. This is because some of the changes are offsetting, and corporate taxes comprise a relatively modest portion of the total federal tax base. However, the implications of the new methodology could be very important for many types of tax reform proposals. The new methodology will allow a differential impact of various types of proposals because it appropriately distributes different types of corporate tax changes to supernormal versus normal capital income, and because it appropriately only distributes the burdensome portion of changes in capital cost recovery policy. Further, if tax reform were ever to be enacted, the new methodology will provide a more accurate baseline distribution of corporate tax burdens than the old methodology.

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Tax Policy Center

Urban Institute and Brookings Institution

# HOW TPC DISTRIBUTES THE CORPORATE INCOME TAX

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## ABSTRACT

Recent economic research has improved our understanding of who bears the burden of the corporate income tax. One key finding is that a substantial share of the return to corporate capital is from "supernormal" returns, the returns to successful risk taking, inframarginal returns, and economic rents in excess of the "normal" return (the riskless return to waiting). The other key result is that international capital mobility shifts some of the corporate income tax burden on the normal return from corporate capital to labor, which is relatively immobile internationally. Based on these recent research findings, TPC has updated its corporate income tax incidence.

For standard distributional analyses, TPC now treats 20 percent of the corporate income tax burden as falling on labor, 20 percent on the normal return to all capital, and 60 percent on the supernormal returns to corporate equity (shareholders). Previously, we had treated the entire corporate income tax burden as being borne by the total returns to all capital. Our updated approach to incidence reduces somewhat the measured progressivity of the corporate income tax, but has little effect on the distribution of the total federal tax burden. We now also distinguish the incidence of changes in the corporate income tax that affect only the normal return, such as changes in cost recovery rules, which we distribute 50 percent to labor and 50 percent to the normal return to all capital. In addition, for short-run analyses of changes in the corporate income tax we now treat all of the burden as falling on shareholders.

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# HOW TPC DISTRIBUTES THE CORPORATE INCOME TAX

The Urban-Brookings Tax Policy Center (TPC) has updated its methodology for distributing the burden of the corporate income tax among taxpayers to reflect the latest findings in the economics literature on the incidence of the tax. This paper summarizes the recent literature on corporate tax incidence, explains TPC's updated incidence assumptions, and describes how TPC implemented these assumptions in its microsimulation model. It concludes with a discussion of the effects of the new incidence assumptions on the distributions of the corporate income tax burden and the total federal tax burden.

TPC's updated incidence assumptions for standard distributional analyses are that 20 percent of the corporate income tax burden is borne by labor, 20 percent by the normal return to all capital, and 60 percent by the supernormal returns to corporate equity (shareholders). Previously, like most other groups producing distributional analyses, we had assumed that the entire corporate income tax burden was borne by the total returns to all capital.

The change in assumptions is based on two main results from the recent literature. One is that a substantial share of the return to corporate capital is due to "supernormal" returns—the returns to successful risk taking, inframarginal returns, and economic rents—in excess of the "normal" return (which only compensates shareholders for the amount they could earn on riskless assets such as high-grade government bonds). We use the low end of the range of recent estimates for this "supernormal" share, 60 percent, and assign it only to shareholders.

The other result is that international capital mobility shifts some of the corporate income tax burden on the "normal" return from corporate capital to labor, which is relatively immobile internationally. We use the middle of the range of recent plausible estimates for labor's share of the normal return, 50 percent. Because the total normal return is 40 percent, labor's share of the total corporate income tax burden is 20 percent. The remaining 20 percent of the total burden is on the normal return to all capital.

TPC's updated incidence assumptions reduce somewhat the measured progressivity of the corporate income tax, because some of the burden is assumed to be on labor. But because the corporate income tax constitutes a relatively small share of total federal taxes, the reduction in its measured progressivity affects the measured progressivity of the entire federal tax system only modestly.

TPC's updated methodology also uses different incidence assumptions depending on the nature of changes in the corporate income tax and whether an analysis examines short-run or long-run effects. Changes in cost recovery provisions, for example, only affect the normal return to capital and therefore are distributed 50 percent to labor and 50 percent to all capital income. As a result, an increase in corporate revenues due, for example, to scaling back accelerated depreciation would be less progressive than the baseline corporate tax, for which the burden on labor is only 20 percent. In contrast, changes that also affect supernormal returns, such as changes in rates, are distributed in the same way as the baseline corporate tax.

TPC's basic distribution tables show the fully phased-in distributional effects of changes in the corporate income tax and other taxes. In the short run, however, the burden of a corporate income tax change cannot be shifted, so it falls entirely on shareholders. Therefore, the short-run distribution of a corporate tax change is more progressive than the long-run distribution, which takes account of shifting of capital to the non-corporate sector and overseas to avoid the tax.

**Incidence of the Corporate Income Tax**

The incidence of all taxes is on households, who bear the burden of taxes through reductions in income from one or more sources (such as wages, interest, and dividends), or through higher prices for goods and services they consume. Distributional analysis assigns these burdens to each household according to the incidence assumptions and the household's sources of income and consumption patterns.

The incidence of the corporate income tax is perhaps the least settled issue in distributional analysis. The tax applies to corporate equity returns, because workers' earnings, interest paid to bondholders and other lenders, and other business costs are deductible in computing taxable profits. Therefore, the legal incidence of the corporate income tax is on the equity returns of shareholders of taxable corporations.[1] The earliest distributional analyses of the federal tax burden followed the legal incidence of the tax, assigning the corporate tax burden to shareholders.[2]

The economic incidence of the tax, however, may differ significantly from its legal incidence if responses to the tax by investors, workers, or consumers shift some of its burden away from shareholders. Shifting investment (capital) from corporate to noncorporate businesses could reduce returns to noncorporate investors, for example, and shifting investment abroad could reduce wages for domestic workers. The economics literature on corporate tax incidence subsequent to the earliest studies examined in detail the technological and market forces through which economic incidence can differ from legal incidence. Economists have long agreed that some of the corporate income tax burden is shifted away from shareholders, but there is no consensus on how the burden is divided among shareholders, other capital income recipients, workers, and consumers.

In a highly influential 1962 paper, Arnold Harberger formalized the analysis of corporate income tax incidence in a simplified general equilibrium model of a closed economy. Although Harberger examined a number of alternative specifications for the model, his basic model has two sectors (corporate and noncorporate) producing goods and services, two inputs to production (capital and labor), fixed total supplies of capital and labor, perfect mobility of capital and labor between sectors (i.e., capital owners and workers receive the same after-tax return in each sector), and a closed economy (i.e., there are no international movements of capital, labor, or goods and services). Firms and households respond to changes in relative prices according to

[1] The equity returns of owners of subchapter S corporations and partnerships are not subject to corporate income tax. Instead, these profits are passed through to owners and taxed under the individual income tax.
[2] See Atrostic and Nunns (1991) for a description of these early distributional analyses.

fixed elasticities of factor substitution and fixed elasticities of demand.[3] Each sector has its own production technology, which may differ in the relative employment of labor and capital (factor intensities), and both sectors exhibit constant returns to scale, meaning that doubling labor and capital inputs doubles output.

The Harberger model explicitly identifies the incidence of the corporate income tax—its effect on households' income and the prices they pay for goods and services. The corporate income tax initially reduces the return to capital in the corporate sector, causing investment (capital) to move to the noncorporate sector where the return is untaxed under the corporate income tax and therefore higher.[4] This movement of capital from the corporate to the noncorporate sector drives the (pretax) return up in the corporate sector and the (untaxed) return down in the noncorporate sector. Capital continues to move until the after-tax return in the corporate sector equals the now lower (but untaxed) return in the noncorporate sector. The corporate income tax thus reduces returns to capital received by investors in both sectors. This movement of capital could also affect the productivity of labor, and therefore wages, by changing the capital to labor ratio in each sector.

In addition to its effects on returns to capital and labor, the corporate income tax affects the prices of goods and services purchased by households. Production costs in the corporate sector are higher because the sector's cost of capital now includes the corporate income tax. With higher production costs the prices for goods and services the corporate sector sells to households must also rise relative to the prices for goods and services sold by the noncorporate sector.[5] So as consumers, households are made relatively worse off by the corporate income tax to the extent they purchase goods and services produced in the corporate sector, but relatively better off to the extent they purchase goods and services produced by the noncorporate sector. Such relative price effects impose a burden on some households but benefit others. For a typical household, however, these price effects are offsetting, so the corporate income tax does not impose a net burden on consumption. [6]

With no net burden on consumption, the entire burden of the corporate income tax must fall on capital, labor, or both. The share of the burden that falls on capital and the share that falls on labor are determined by the various elasticities and factor intensities specified in the model. When Harberger calibrated the model to estimated elasticities and factor shares for the U.S. economy, he found that the entire corporate tax burden falls on capital (including noncorporate capital), with essentially none of the burden on labor. Harberger summarized his findings: "It is hard to avoid the conclusion that plausible alternative sets of assumptions about relevant

[3] The elasticity of factor substitution measures the change in the capital-labor ratio resulting from a change in the relative prices of capital and labor. The elasticity of demand measures the change in consumption of a good or service resulting from a change in its price relative to the prices of other goods and services.
[4] Returns to capital from both the corporate and noncorporate sectors are subject to individual income tax, but here we are interested only in the differential effect of the corporate income tax across sectors.
[5] Note that it is the *relative* prices of goods and services produced by the corporate and noncorporate sectors that matter for any burden on consumption. The overall price level might be unchanged or rise, depending on actions taken by the Federal Reserve. The Harberger model takes any change in the overall price level into account by measuring returns to capital and labor in real (price-level adjusted) terms.
[6] Because such relative price effects sum to zero (i.e., impose no aggregate net burden or benefit), they are generally not taken into account in Harberger-type models.

elasticities all yield results in which capital bears very close to 100 percent of the tax burden" (1962, 234)

Harberger's main result—that the entire corporate income tax burden is spread across corporate and noncorporate capital—was widely adopted as the standard incidence assumption in subsequent distributional analyses. The assumption was made in papers by academics such as Browning and Johnson (1979) and Feldstein (1988). It was also made by analysts in the federal government, first by Treasury in *Blueprints for Basic Tax Reform* (1977) and later for all Treasury distributional analyses (see Nunns 1995 and Cronin 1999),[7] by the Tax Analysis Division of the Congressional Budget Office (see CBO 2012[8]), and, for the brief period (1993–1994) that they distributed the corporate income tax, by the Joint Committee on Taxation (JCT; see JCT 1993). TPC also adopted the assumption for its distributional analyses (see Rohaly, Carasso, and Saleem 2005).

*International Capital Mobility*

A key aspect of the original Harberger model is that the economy is closed, so that corporate capital can move to the noncorporate sector of the U.S. economy, but not overseas, in response to the corporate income tax. That assumption seemed reasonable when the U.S. economy and capital stock represented a substantial share of the world economy and capital stock and international capital flows were fairly limited. Over time, however, the relative size of the U.S. economy and its capital stock have fallen and international capital mobility has greatly increased, raising the potential for shareholders to avoid a portion of the corporate tax burden by shifting capital abroad. The evolution of the U.S. economy and the growing recognition among economists of the potential importance of internationally mobile capital (and relatively less mobile labor) on the incidence of the corporate income tax precipitated a number of theoretical and empirical research papers on the issue, which are only briefly summarized here.[9]

Randolph (2006) develops an extended Harberger model to examine the implications of an open economy on Harberger's results. In Randolph's model, labor is immobile internationally, so a reduced domestic capital stock will mean that much of the corporate income tax burden falls on domestic labor as the capital-labor ratio, and therefore labor productivity, falls. The allocation of the burden between domestic and foreign capital and domestic labor (and possibly land) depends on several factors, including the relative size and mobility of the domestic capital stock, the allocation of corporate capital across industries that produce traded and nontraded goods, product and factor substitution elasticities, and whether and how foreign governments react to changes in U.S. corporate income tax policies. Calibrating the model to the U.S. economy, Randolph shows that in the "base case" (with perfectly mobile capital, internationally immobile labor, perfect substitutability between domestic and foreign products, and no change in foreign tax regimes),

[7] As discussed below, Treasury has recently revised its corporate income tax incidence assumptions.
[8] As discussed below, CBO has also recently revised its corporate income tax incidence assumptions. In some earlier analyses, CBO also presented distributions under alternative corporate income tax incidence assumptions—that some or all of the tax is borne by labor. See, for example, CBO (1987).
[9] Harberger has authored several of these papers, in which he argues that for the analysis of the incidence of a single country's corporate income tax, an open economy model is appropriate. See, for example, Harberger (2008). For additional references and more comprehensive reviews of the recent literature, see Auerbach (2005), Gentry (2007), and Gravelle (2010, 2011).

70 percent of the corporate income tax burden is borne by domestic labor and 30 percent by domestic capital. This is a dramatically different result from the 100 percent burden on (domestic) capital found in Harberger's closed economy model.

Randolph finds that worldwide, capital bears 100 percent of the U. S. corporate income tax burden, with gains to foreign labor offsetting the losses to domestic labor and the entire net burden of the tax falling on domestic capital and labor.[10] This worldwide result is similar to Harberger's closed economy result, except that labor incomes do not equalize due to labor's international immobility. Randolph also conducts simulations using alternative model parameters, finding that domestic labor bears a lower share of the corporate income tax burden if capital is not perfectly mobile internationally, and in certain other circumstances.

Gravelle reviews Randolph's and several similar studies that use open economy general equilibrium models to analyze corporate tax incidence. She also reviews the most recent econometric estimates of factor, product, and portfolio substitution elasticities, and uses these estimates to adjust the various model results. She summarizes: "Taken together, these results, albeit imperfect, suggest that an assumption that 40 percent of the corporate tax burden falls on labor and 60 percent falls on capital is consistent with open-economy models and with the current empirical evidence regarding the appropriate parameter values for those models" (2010, 26).

Other recent studies reviewed in Gravelle (2011) and Jensen and Mathur (2011) have approached the issue econometrically. These studies use variations in corporate income tax rates across countries or states, or a wage-bargaining model, to estimate the effect of the tax on wages. Both Gravelle and Jensen and Mathur note the various econometric issues such studies confront: endogeneity, sample selection, comparability of data, measurement error, and omitted variables bias. Jensen and Mathur note that most of the studies use standard methods to try to address these issues. Gravelle observes that corporate income tax incidence is the result of general equilibrium effects, which these studies, based on firm, state, or country wages, cannot adequately control for.

The recent empirical studies reach sharply different estimates of labor's share of the corporate income tax burden. Some find shares that fall in the same range as the results from recent Harberger-type models, but others find far higher shares, ranging between 200 to 400 percent. Jensen and Mathur suggest that the higher range could indicate much higher deadweight losses from the corporate income tax than previous estimates indicated. Gravelle characterizes these high estimates as "improbable."

**Incidence Issues Not Addressed in Harberger-Type Models**

The Harberger model and extensions of it by Randolph and others all examine the long-run incidence of a pure tax on the (riskless) normal return to corporate (equity) capital, assuming constant returns to scale in production and perfectly competitive markets. Results from these models provide guidance on how the portion of the corporate income tax that falls on the normal return to capital might be allocated between capital and labor in a standard, long-run

[10] The burden on foreign capital is offset by the gains to foreign labor, so there is no net foreign burden.

distributional analysis. But these models do not provide direct guidance on the incidence of the tax on returns above the normal return to capital, the incidence effects of provisions that cause taxable income to differ from economic income, or differences between short- and long-run incidence. Each of these incidence issues can be critical to a distributional analysis of the corporate income tax or proposed changes to it.

*Supernormal Returns*

Corporate profits include both "normal" and "supernormal" returns. To attract equity capital, corporations need to compensate shareholders for the time value of money and the opportunity costs of forgoing the income they could earn on riskless assets (such as high-grade government bonds). This riskless return to waiting is the "normal" return to capital. But profits also include the returns to successful risk taking,[11] inframarginal returns, and economic rents.[12] If these "supernormal" returns are pure rents, they bear the full burden of the corporate income tax and this portion of the burden is not shifted from shareholders, even in the long run.[13] However, if supernormal returns are the result of entrepreneurial labor (e.g., Bill Gates and others who founded Microsoft), taxing those returns could discourage such entrepreneurial efforts and some of the burden could fall on domestic labor generally by making workers less productive.

A number of studies have estimated the share of corporate income that represents supernormal returns. Gordon and Slemrod (1988) compute taxable corporate income under a cash flow tax, which would only tax supernormal returns, but they do not compute the share it represents of corporate income. Gentry and Hubbard (1997) estimate that supernormal returns represent 60 percent of the total returns to equity. Using the same approach as Gordon and Slemrod, Toder and Rueben (2007) estimate that only 32 percent of corporate returns are normal, implying that 68 percent are supernormal. Recent estimates reported in Cronin, Lin, Power and Cooper (2012), based on aggregate data for some years and microsimulation results for others, indicate an average supernormal share of 63 percent. Similar TPC calculations based on Flow of Funds data for 1995–2009 find a 62 percent share for supernormal returns. However, although supernormal returns generally accrue to shareholders, the corporate income tax provides a strong incentive to remove these returns from income subject to current U.S. corporate income tax, and corporations have responded to that incentive by moving these returns abroad.[14] So it is possible that the various estimates omit some supernormal returns on intangible assets because these assets have been transferred to foreign entities and returns on them are not included in the underlying U.S. corporate income tax data.

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[11] Corporate equity on average receives a higher return than bonds over most long historical periods (the equity premium), reflecting the relatively higher variability of corporate profits. As Auerbach (2006) notes, however, taxing risk premiums raises revenue but would not impose a net burden if the income tax allowed full loss offsets and only economic depreciation. While profits on average are higher due to this risk premium, the profits of some companies simply reflect unusually successful investments.

[12] An economic rent is the return an individual or a business receives from an activity in excess of what could be earned in alternatives. The sources of economic rents are diverse, including items such as the higher returns of unusually productive farmland or oil wells, the returns to scarce skills of top professional athletes, and the returns to companies with a unique product or exceptionally efficient and nonreplicable workforce.

[13] Harberger (1962) explored this issue through a modification of his basic model. Note that through capitalization, the burden on such supernormal returns may fall on initial investors rather than current shareholders.

[14] See Grubert (2012).

*Mismeasurement of Income*

Taxable income as measured for corporate income tax purposes can deviate substantially from economic income. A major difference is in the measurement of depreciation of capital goods. Income tax depreciation schedules for plant and equipment are generally accelerated relative to economic depreciation. The cost of producing intangibles, such as research and advertising, is generally expensed for income tax purposes, rather than capitalized and recovered as the value of these assets declines. Other cost recovery rules, such as depletion allowances and certain methods of inventory accounting, are also accelerated relative to economic cost recovery. Accelerated cost recovery delays income tax payments, reducing the present value of taxes on the return to affected investments.

In addition to accelerated cost recovery rules, the corporate income tax provides credits for a percentage of the cost of certain capital goods (in particular, energy-related investments), and in the past allowed a more general investment tax credit. Investment tax credits also reduce the present value of income tax payments, by both increasing and accelerating the recovery of costs relative to economic depreciation.

Cost recovery and related income measurement rules affect the normal return to corporate equity but they generally do not affect supernormal returns. The incidence of the burden due to changes in these rules is therefore different from the incidence of the baseline burden of the corporate income tax or changes in rates or similar provisions that affect both normal and supernormal returns. Distributional analyses of corporate income tax changes must therefore distinguish between the effects of different changes in tax law.

*Short Run versus Long Run*

In the short run, the incidence of any change in corporate income tax burdens is entirely on shareholders because any shifting of the burden (or benefit of a tax reduction) to other factors can only occur over time.[15] The immediate effect of the change will be capitalized into the value of shares, so shareholders cannot avoid the burden due to the change by selling their shares. Over time, however, an increase in the corporate income tax can lead to a shift in capital from the corporate to the noncorporate sector or overseas, driving up pretax returns on corporate capital and lowering pretax returns on capital in other sectors and possibly wages in the United States. The size and distribution of burden changes may also differ between the short run and the long run apart from changes in pretax corporate returns, either because provisions phase in (or out) over time, or because changes in cost recovery rules only apply to new investment and the existing stock (which remains subject to the prior rules) will not be replaced by new investment for an extended period of time.

[15] A change in the taxation of labor income effected through corporate income tax provisions would burden labor (both in the long run and perhaps in the short run), but such changes would not be part of the provisions that define the corporate income tax, which are designed to tax returns to corporate (equity) capital and are not considered here.

**Plausible Range of Incidence Assumptions**

The formalization of corporate income tax incidence analysis using general equilibrium models in Harberger (1962) initiated an extensive literature that has examined in depth alternative specifications and parameterizations of such models. With recent extensions to open economy versions and use of the latest econometric estimates of key parameters, Harberger-type models provide a plausible range of estimates for the incidence of the corporate income tax burden on the normal return to capital. In contrast, results from the recent empirical literature on corporate tax incidence have not been broadly confirmed, raise various econometric issues that are difficult to address satisfactorily, and in some cases appear to be implausible. For these reasons, the econometric studies do not appear to provide reliable guidance on the plausible range of incidence assumptions.

Based on our reading of the recent literature, TPC has combined a range of results from Harberger-type models with the range of estimates for the share of corporate income due to supernormal returns to develop a plausible range of long-run incidence assumptions for standard distributional analysis.[16] For labor's share, we used the range of 40 percent in Gravelle (2010) to 70 percent in Randolph (2006). For the share of corporate income due to supernormal returns, we used the range of 60 percent in TPC's calculations from Flow of Funds data to the roughly 70 percent implied by Toder and Rueben (2007). Combining these results requires an assumption about how much (if any) of the corporate income tax burden on supernormal returns is shifted from shareholders to other capital or to labor. TPC assumes that shareholders cannot shift any portion of this burden, so that it falls entirely on corporate equity.[17] Using this assumption, we can combine the ranges of results into a plausible range of assumptions about the share of the corporate tax burden borne by labor, by all (i.e., corporate and noncorporate) capital, and by corporate equity only.

The combined results give a range for labor's share of 12 to 28 percent, for all (corporate and noncorporate) capital's share of 9 percent to 24 percent, and for corporate equity's share of 60 to 70 percent (Table 1).

**Table 1**
**Plausible Range of Long-Run Incidence Assumptions for the Corporate Income Tax**

| Supernormal Return Share/ Labor Share of Normal Return | Return Shares (percent) | | | | |
|---|---|---|---|---|---|
| | Total | Super-normal | Normal | | |
| | | | Total | Labor | Capital |
| **Supernormal return share is low (60%) and:** | | | | | |
| **Labor share of normal return is low (40%)** | 100 | 60 | 40 | 16 | 24 |
| **Labor share of normal return is high (70%)** | 100 | 60 | 40 | 28 | 12 |
| | | | | | |
| **Supernormal return share is high (70%) and:** | | | | | |
| **Labor share of normal return is low (40%)** | 100 | 70 | 30 | 12 | 18 |
| **Labor share of normal return is high (70%)** | 100 | 70 | 30 | 21 | 9 |

[16] Modification of these incidence assumptions necessary for short-run distributional analyses and for analysis of changes in cost recovery provisions is discussed below.
[17] As explained below, we temper this assumption by using the lowest value in the supernormal return share range.

How much using alternative assumptions in these ranges affects distributional results depends on three factors:

- The relative distributions across income classes of labor income, the normal return to all capital income, and corporate equity income;
- The relative share of corporate income tax burdens in total tax burdens included in the distributional analysis; and
- Whether the effect of changes in the corporate income tax are distributed in the same manner (i.e., using the same incidence assumptions) as the baseline corporate income tax burden.

The normal return to all capital income is more concentrated at higher income levels than labor income, and corporate equity income is generally more concentrated at higher income levels than the normal return to all capital income (Table 2). As a result, the corporate income tax distribution would be most progressive using the highest (70 percent) share for supernormal returns (corporate equity income only) and the lowest (40 percent) share of the normal return for labor. That combination assigns just 12 percent of the total burden of the corporate income tax to labor (column 4 in Table 2).

**Table 2**
**Shares of Factor Incomes and the Corporate Income Tax Under the Most and Least Progressive and TPC's Updated Long-Run Incidence Assumptions, by Cash Income Percentile in 2015**

| Cash Income Percentile | Income Shares | | | Corporate Income Tax Shares Under Alternative Incidence Assumptions | | |
|---|---|---|---|---|---|---|
| | Labor | All Capital[2] | Corporate Equity | Most Progressive | Least Progressive | TPC's Updated |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Lowest Quintile**[1] | 3.5% | 1.8% | 0.6% | 1.2% | 1.6% | 1.4% |
| **Second Quintile** | 9.8% | 3.6% | 1.8% | 3.1% | 4.3% | 3.8% |
| **Middle Quintile** | 16.2% | 4.8% | 2.9% | 4.8% | 6.8% | 5.9% |
| **Fourth Quintile** | 22.5% | 7.4% | 5.7% | 8.1% | 10.6% | 9.4% |
| **Top Quintile** | 47.8% | 81.5% | 88.4% | 82.3% | 76.2% | 78.9% |
| **All** | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | | | | |
| **Addendum** | | | | | | |
| **80-90** | 15.2% | 5.2% | 4.4% | 5.8% | 7.5% | 6.7% |
| **90-95** | 9.8% | 6.1% | 5.2% | 5.9% | 6.6% | 6.3% |
| **95-99** | 11.9% | 15.4% | 12.8% | 13.1% | 12.8% | 13.1% |
| **Top 1 Percent** | 10.9% | 54.8% | 66.1% | 57.4% | 49.3% | 52.8% |
| **Top 0.1 Percent** | 4.3% | 30.0% | 44.2% | 36.8% | 31.3% | 33.4% |

Source: TPC microsimulation model.

[1] Tax units with losses are excluded from the lowest quintile but included in the totals.

[2] Normal return only.

Conversely, the distribution would be least progressive using the lowest (60 percent) share for supernormal returns and highest (70 percent) share of the normal return for labor, giving labor 28 percent of the total burden (column 5 in Table 2). The share of the top quintile, for example, would be 82.3 percent under the most progressive assumptions, but not much less, 76.2 percent, under the least progressive.

**Updated TPC Incidence Assumptions**

The plausible range of incidence assumptions from the recent literature indicates that the assumptions TPC previously adopted—that the entire corporate income tax burden falls on the total return to all capital, with no separate share on supernormal returns to corporate equity capital and no burden on labor—require updating.

TPC's updated long-run incidence assumptions for the corporate income tax are that 60 percent of the burden falls on supernormal returns, 20 percent on labor income, and 20 percent on the normal return to all capital (Table 3). We assume the burden on supernormal returns falls only on shareholders (corporate equity only) and therefore selected the bottom of the plausible range to reflect the possibility that a portion may be shifted to other factors. We assume that labor bears 20 percent of the burden, the midpoint of the plausible range, making the residual share for the normal return to all capital also 20 percent. These shares imply that the corporate income tax burden on the normal return is split evenly between labor and capital. Adopting these rounded shares as TPC's updated long-run assumptions produces distributional results that fall between the extremes of the plausible range but differ little from results that would be obtained using any set of shares within the range (compare columns 4, 5 and 6 of Table 2).

**Table 3**
**TPC's Updated Long-Run Incidence Assumptions for the Corporate Income Tax**

| Supernormal Return Share/ Labor Share of Normal Return | Return Shares (percent) | | | | |
|---|---|---|---|---|---|
| | Total | Super-normal | Normal | | |
| | | | Total | Labor | Capital |
| **Supernormal return share is 60% and labor share of normal return is 50%** | 100 | 60 | 40 | 20 | 20 |

The Treasury's Office of Tax Analysis (OTA) recently updated its incidence assumptions for distributing the corporate income tax (Cronin, Lin, Power and Cooper 2012). The updated OTA assumptions are quite similar to TPC's updated assumptions and fall well within the plausible range (Table 1). OTA assumes that a somewhat higher share of the burden falls on supernormal returns than TPC does (63 percent versus 60 percent). However, OTA estimates that about 1 percent of corporate income tax revenues represent repayments of "loans" due to expensing and accelerated depreciation provisions, rather than a burden on the normal return, and adjusts the normal return accordingly.[18] This adjustment reduces OTA's estimated burden on the normal return to 36 percent, which it splits evenly between labor and capital. OTA's resulting shares on both labor and all capital are therefore 18 percent (versus TPC's 20 percent).

[18] TPC's updated incidence assumptions do not include a comparable adjustment.

The Tax Analysis Division of CBO has also recently updated its incidence assumptions for distributing the corporate income tax (CBO 2012). CBO now distributes 75 percent of the corporate income tax burden to all capital income and 25 percent to labor. CBO does not distinguish normal and supernormal returns to capital, but these returns have similar distributions (Table 2) so the distinction does not have a significant effect on distributional results. Aside from the normal-supernormal distinction, CBO's updated assumptions are also well within the plausible range (Table 1).

**Implementing TPC's Updated Incidence Assumptions**

Implementing TPC's updated corporate income tax incidence assumptions in its microsimulation model requires estimates of the corporate income tax burden and the distribution of corporate shareholders' part of that burden, as well as operational definitions of income from labor, corporate equity, and the normal return to all capital.

*Burden Measure*

For distributional analyses, the burden of the corporate income tax is generally measured by revenues. CBO projections of corporate income tax revenues are typically used to measure burdens under baseline law, while JCT or OTA revenue estimates are typically used to measure the burden of changes to baseline law. Using revenue as the measure of corporate income tax burden is consistent with the measure typically used in Harberger-type models, and revenue is usually the only measure available. However, measuring burden by revenue omits the excess burdens due to the reductions in economic efficiency that result from the corporate income tax. In addition, as discussed below, revenue estimates may include offsetting changes in individual income taxes that could affect the distribution somewhat, and in some circumstances revenue may not appropriately measure burden so an alternative measure is used.

Increases or reductions in corporate income tax liabilities will correspondingly decrease or increase after-tax corporate income, which will change dividend payments, the value of corporate stock, or both. Changes in dividends received or in realizations of gains on stock will in turn alter individual income tax liabilities in an opposite, offsetting direction to the corporate income tax change.[19] JCT and OTA estimators include these offsetting individual income tax effects as part of the corporate income tax estimate. Using JCT or OTA corporate income tax estimates results in TPC distributing these offsetting individual income tax effects in the same way it distributes the corporate income tax, instead of in proportion to changes in individual income taxes paid on income from dividends and gains on corporate stock.

Cost recovery provisions generally affect corporate tax revenues unevenly over multiple years, so the revenue change in any one year from a legislative revision to cost recovery rules does not properly reflect the annual change in tax burden. In place of annual revenue changes, TPC uses a real level annuity measure for the annual change in burden for long-run distributional analyses. This annuity has the same present value as the change in revenues over the life of the stock of covered assets in the long run (i.e., when all covered assets are subject to the changed cost

[19] Over time, the change in the corporate income tax would be partially shifted to non-corporate capital and to labor, changing reported incomes and associated individual income tax liabilities for those other factors.

recovery rules), computed on the current level of the stock of covered assets. For short-run analyses, only the change in revenues from the current level of investment in covered assets is taken into account. When assets with varying useful lives are covered by a cost recovery provision, TPC computes the real level annuity separately for broad classes (defined by useful lives) of covered assets, and then sums the results for the analysis.[20]

A final issue in measuring burden is the effect of the corporate income tax on relative prices of consumer goods. These relative price effects have no net effect on the corporate tax burden, but change the burden across households to the extent households consume different direct and indirect shares of corporate and noncorporate goods. Such relative price effects are typically taken into account in distributing the burden of a VAT or other consumption-based tax.[21] The data required to compute the relative price effects of direct taxes on consumption are generally available from the Consumer Expenditure Survey conducted by the Bureau of Labor Statistics. No such data are generally available, however, for the *indirect* effects of the corporate income tax on consumer prices, and a significant effort would be required to develop estimates of such effects. Further, there is no reason to expect that the consumption share for goods and services produced in the corporate sector differs across income groups. For these reasons, measures of the corporate income tax burden typically do not take into account relative price effects. TPC's burden measure also omits these effects.

*Distributing the Share of the Burden that Falls on Corporate Shareholders*

Shareholders bear a large share of the corporate income tax burden under TPC's updated incidence assumptions—60 percent of the total due to the burden on supernormal returns plus much of the 20 percent of the total due to the capital income share of the burden on the normal return. Shareholders subject to individual income tax can be identified through their reporting of dividends or capital gains on stock on their tax returns, as described below. But not all shareholders are individuals, and a large share of individual holdings is held indirectly through defined contribution plans like 401(k)s and IRAs.[22] At the end of 2011, individuals directly held only a little over a third (34.3 percent) of the stock of domestic corporations, and indirectly another 30.0 percent (Table 4).[23] The remaining 35.7 percent was held primarily by defined benefit retirement plans (12.6 percent of the total) and the rest of the world (18.8 percent), with smaller holdings by nonprofits (3.4 percent) and the federal, state and local governments (0.8 percent). Auerbach (2006) discusses the difficulty of determining how households bear the burden of the corporate income tax attributable to stock held by nonprofits, defined benefit plans, or governments.

It is also unclear to what extent domestic households bear the burden of the tax attributable to holdings by the rest of the world. The holdings of domestic corporate stock by the rest of the world are roughly equal to the holdings of stock in nondomestic corporations by domestic

[20] In practice, useful lives are based on tax rather than economic asset classes.
[21] See, for example, Toder, Nunns and Rosenberg (2011) and Cronin (1999).
[22] Mutual funds are also a form of indirect holdings but generally pass through dividends and capital gains to owners, who report the income for tax purposes.
[23] Table 4 nets out all ownership by other domestic corporations.

households.[24] Auerbach nets these holdings without discussing the incidence of the U.S. federal corporate income tax on them.

Distributional analyses prepared by academics, federal agencies, and TPC have generally not addressed the issue of stock ownership by entities other than households or the incidence of the corporate income tax on such owners. Instead, the entire corporate income tax burden has been attributed to the factor incomes of (domestic) households according to the incidence assumptions made for the analysis. Absent further guidance from the literature, TPC will continue to distribute the entire measured corporate income tax burden to U.S. households according to its updated incidence assumptions.

**Table 4**
**Ownership of Stock in Domestic Corporations, 2011 (End of Year)**

| Owner | Stock Holdings | |
|---|---|---|
| | Value ($ billions) | Percent of Total |
| **Total** | **16,883** | **100.0%** |
| **Household sector, total** | 10,862 | 64.3% |
| **Direct** | 5,799 | 34.3% |
| **Indirect** | 5,063 | 30.0% |
| **Mutual funds** | 1,962 | 11.6% |
| **Life insurance** | 1,139 | 6.7% |
| **Defined contribution plans** | 1,962 | 11.6% |
| **Nonprofits** | 579 | 3.4% |
| **Defined benefit plans** | 2,134 | 12.6% |
| **Governments** | 136 | 0.8% |
| **Rest of the World** | 3,172 | 18.8% |

Source: Board of Governors of the Federal Reserve System, *Flow of Funds Accounts for the United States* (March 12, 2012), Tables L.117, L.118.b, L.118.c, L.119, L.120, L.122, L.123, L.214, L.225, B.100, B.100.e and author's calculations.

*Labor and Capital Income*

TPC distributes shares of the corporate income tax burden to sources of income by applying its updated incidence assumptions to the relevant labor and capital components of TPC's cash income measure.[25] Labor income for purposes of distributing the corporate income tax includes

[24] Compare Lines 3 and 6 of Table L.213 in Board of Governors of the Federal Reserve System (2012).
[25] Cash income is defined as AGI, less state and local tax refunds, plus: above-the-line deductions, nontaxable Social Security benefits, cash transfer payments, nontaxable pensions, tax-exempt interest, employee retirement contributions, the employer share of payroll taxes, and the corporate income tax. Capital income is defined as

wages, employee retirement contributions, distributions (excluding rollovers) from defined contribution plans and defined benefit plans, and the employer's share of Social Security and Medicare taxes (i.e., FICA). Labor income also includes the labor component of self-employment and partnership income, assumed to be 80 percent of the SECA base.[26]

Capital income for purposes of distributing the corporate income tax includes returns to assets held directly and the capital component of self-employment and pass-through entity income. The various types of capital income must be split between normal and supernormal returns to implement the updated incidence assumptions (Table 5).

**Table 5**
**Normal and Supernormal Shares of Capital Income by Source for Purposes of Distributing the Corporate Income Tax**

| Income source | Capital Income Share That Is: | |
|---|---|---|
| | Normal | Supernormal |
| **Dividends**[1] | 40 | 60 |
| **Capital gains on stocks**[2] | 40 | 60 |
| **Capital share of earnings subject to SECA**[3] | 100 | 0 |
| **Other self-employment and pass-through income** | 40 | N.A.[4] |
| **Capital gains on assets other than corporate stock** | 40 | N.A.[4] |
| **Supplemental gains** | 100 | 0 |
| **Taxable interest** | 100 | 0 |
| **Tax-exempt interest** | 100 | 0 |

[1] Includes only "qualified" dividends; other income reported as dividends on tax returns is treated as taxable interest.
[2] Includes capital gains distributions from mutual funds and 70 percent of capital gains of pass-through entities (the assumed share of their gains from sales of corporate stock).
[3] Earnings subject to SECA are assumed to be 20 percent capital and 80 percent labor, based on NIPA aggregate returns to capital and labor in the corporate sector.
[4] These are non-corporate sources of capital income, for which the supernormal portion (60 percent) is assumed not to bear any corporate income tax.

### TPC's New Distribution of the Corporate Income Tax

The corporate income tax is less progressive under TPC's updated incidence assumptions than under the prior assumption: more of the burden falls on low- and middle-income households and less on high-income households (Table 6). For example, the middle quintile bears 5.9 percent of the burden under TPC's updated incidence assumptions, compared with 4.0 percent under the prior incidence assumption, while the top quintile bears 78.9 percent, down from 85.4 percent (columns 1 and 2 of Table 6).

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qualified and nonqualified dividends, taxable and tax-exempt interest, capital gains, and the (positive) capital income component of self-employment and pass-through entity income.
[26] SECA is the Social Security and Medicare tax on self-employed individuals (including active partners in a partnership). The 80 percent figure is based on aggregate returns to capital and labor in the corporate sector from the National Income and Product Accounts (NIPA).

**Table 6**
**Shares and Effective Tax Rates for Corporate Income Tax under Prior and Updated Incidence Assumptions, by Cash Income Percentile, 2015**

| Cash Income Percentile | Prior Incidence Assumption[1] | Updated Incidence Assumptions[2] | Prior Incidence Assumption[1] | Updated Incidence Assumptions[2] |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| | --- *Shares of Burden* --- | | --- *Effective Tax Rates* --- | |
| **Lowest Quintile[3]** | 0.9% | 1.4% | 0.7% | 1.2% |
| **Second Quintile** | 2.5% | 3.8% | 0.9% | 1.3% |
| **Middle Quintile** | 4.0% | 5.9% | 1.0% | 1.4% |
| **Fourth Quintile** | 6.2% | 9.4% | 1.1% | 1.7% |
| **Top Quintile** | 85.4% | 78.9% | 5.5% | 5.2% |
| **All** | 100.0% | 100.0% | 3.4% | 3.4% |
| | | | | |
| **Addendum** | | | | |
| **80-90** | 5.4% | 6.7% | 1.5% | 1.8% |
| **90-95** | 5.8% | 6.3% | 2.3% | 2.5% |
| **95-99** | 15.0% | 13.1% | 4.3% | 3.8% |
| **Top 1 Percent** | 59.3% | 52.8% | 10.3% | 9.3% |
| **Top 0.1 Percent** | 35.6% | 33.4% | 12.5% | 11.9% |

Source: TPC microsimulation model.

[1] The prior corporate incidence assumption is that 100% of the corporate income tax burden is borne by the total return to all capital income.

[2] The updated incidence assumptions are that 20% of the corporate income tax burden is borne by labor income, 20% by the normal return to all capital income and 60% by corporate equity income.

[3] Tax units with losses are excluded from the lowest quintile but included in the totals.

The reduction in progressivity of the corporate income tax due to the updated incidence assumptions can also be measured by effective corporate tax rates (columns 3 and 4 of Table 6). Effective rates are higher in the first four income quintiles and only lower in the fifth quintile. Within the fifth quintile, effective tax rates are higher for the 80th to 95th percentiles and lower for the top 5 percent, with the largest reduction for the top 1 percent for which the estimated effective rate falls from 10.3 percent to 9.3 percent.

**Effect of Alternative Incidence Assumptions on the Distribution of the Federal Tax Burden**

Alternative assumptions about the incidence of the corporate income tax affect the distribution of the total federal tax burden (Table 7). Under TPC's updated incidence assumptions for standard long-run analyses, the total federal tax burden is 4.9 percent of income for the lowest quintile, 32.0 percent for the highest quintile, and 38.9 percent for the top 1 percent of tax units. Using the

**Table 7**
**Effective Total Federal Tax Rates under Alternative Assumptions about Corporate Income Tax Incidence, by Cash Income Percentile, 2015**
**(Current Law Baseline)**

| Cash Income Percentile | Incidence Assumptions | | | |
|---|---|---|---|---|
| | | In Plausible Range | | |
| | Updated (Standard)[1] | Most Progressive[2] | Least Progressive[3] | Prior[4] |
| | --- *Effective Tax Rates* --- | | | |
| **Lowest Quintile**[5] | 4.9% | 4.7% | 5.1% | 4.6% |
| **Second Quintile** | 13.0% | 12.8% | 13.2% | 12.7% |
| **Middle Quintile** | 18.6% | 18.3% | 18.8% | 18.2% |
| **Fourth Quintile** | 22.3% | 22.0% | 22.5% | 21.9% |
| **Top Quintile** | 32.0% | 32.2% | 31.8% | 32.2% |
| **All** | 25.4% | 25.4% | 25.4% | 25.4% |
| | | | | |
| **Addendum** | | | | |
| **80-90** | 25.7% | 25.4% | 25.9% | 25.3% |
| **90-95** | 27.2% | 27.0% | 27.3% | 26.9% |
| **95-99** | 30.8% | 30.8% | 30.7% | 31.2% |
| **Top 1 Percent** | 38.9% | 39.7% | 38.3% | 39.5% |
| **Top 0.1 Percent** | 40.8% | 42.0% | 40.0% | 41.1% |

Source: TPC microsimulation model.

[1] Under the updated incidence assumptions for long-run (standard) distributions of the baseline corporate income tax burden or the burden of rate and similar changes, 20% is distributed to labor income, 20% to the normal return to all capital income and 60% to corporate equity income.

[2] Under the most progressive incidence assumptions in the plausible range, 12% of the (long-run) corporate income tax burden is distributed to labor income, 18% to the normal return to all capital income and 70% to corporate equity income.

[3] Under the least progressive incidence assumptions in the plausible range, 28% of the (long-run) corporate income tax burden is distributed to labor income, 12% to the normal return to all capital income and 60% to corporate equity income.

[4] Under the prior incidence assumption, all of the (long-run) corporate income tax burden is distributed to the total return to all capital income. Because cash income includes the (baseline) corporate income tax burden, the distribution of cash income is slightly different under the prior and updated incidence assumptions.

[5] Tax units with losses are excluded from the lowest quintile but included in the totals.

most and least progressive corporate income tax incidence assumptions within the plausible range (second and third columns of Table 7) would have only a modest effect on the measured total federal tax burden. For example, the burden on the highest quintile would only vary between 32.2 percent under the most progressive incidence assumptions and 31.8 under the least progressive.

Using TPC's prior incidence assumption that the entire corporate income tax burden falls on the total return to all capital income would make the corporate income tax slightly more progressive than under TPC's updated incidence assumptions (last column of Table 7).[27] However, differences are generally not large. For example, the effective tax rate in the highest quintile is only slightly higher under the prior incidence assumption (32.2 percent versus 32.0 percent). The difference for the top 1 percent is the largest (39.5 percent versus 38.9 percent).

**Incidence and Distribution of Corporate Income Tax Changes**

The discussion in the preceding sections focused on how the updated incidence assumptions for "standard" long-run analyses affected the distribution of the corporate income tax and total federal taxes. These "standard" incidence assumptions apply for distributing the baseline corporate income tax burden. These assumptions also apply for distributing the long-run change in burdens due to changes in the corporate income tax rate or changes in the tax base that affect both normal and supernormal returns. But, as discussed above, changes in cost recovery provisions affect only the normal return and so in the long run would be distributed according to the updated assumption for the incidence on the normal return—50 percent to labor income and 50 percent to the normal return to all capital income.

In the short run, the entire incidence of the burden of any change in the corporate income tax is on shareholders (corporate equity income). As noted above, however, the size of the short-run change in in burden (or benefit of a reduction in tax) may be quite different from the change in long-run burden (or benefit). The difference can arise either because the change is phased in (or out) over time or because a change in cost recovery rules applies only to new investment.

The distribution of the corporate income tax burden is more progressive in the short run than in the long run and more progressive in the long run for changes in rates than for changes in cost recovery provisions (Table 8). For example, the highest quintile bears 88.4 percent of changes in burden in the short run, 78.9 percent of the burden in standard long-run distributions, and 64.6 percent of changes in the long-run burden due to changes in cost recovery provisions.

**Conclusions**

TPC's updated methodology for distributing the corporate income tax reduces the measured progressivity of the tax, primarily because it assumes that some of the burden falls on labor income, rather than only on capital income as previously assumed. However, the corporate income tax remains a very progressive component of the federal tax system, and because the corporate income tax represents a relatively small share of total federal taxes, the reduced

[27] Note that the distribution of cash income, which includes the (baseline) corporate income tax burden, is slightly different under the two sets of incidence assumptions.

**Table 8**
**Distribution of Changes in the Corporate Income Tax Burden: Long-Run Changes in Rates or in Cost Recovery Provisions and All Short-Run Changes, by Cash Income Percentiles, 2015**

| Cash Income Percentile | Long-Run Burden | | Short-Run Changes in Burden[3] |
|---|---|---|---|
| | Rate Change[1] | Change in Cost Recovery Provisions[2] | |
| | --- *Shares of Corporate Income Tax Burden* --- | | |
| **Lowest Quintile**[4] | 1.4% | 2.7% | 0.6% |
| **Second Quintile** | 3.8% | 6.7% | 1.8% |
| **Middle Quintile** | 5.9% | 10.5% | 2.9% |
| **Fourth Quintile** | 9.4% | 15.0% | 5.7% |
| **Top Quintile** | 78.9% | 64.6% | 88.4% |
| **All** | 100.0% | 100.0% | 100.0% |
| | | | |
| **Addendum** | | | |
| **80-90** | 6.7% | 10.2% | 4.4% |
| **90-95** | 6.3% | 7.9% | 5.2% |
| **95-99** | 13.1% | 13.6% | 12.8% |
| **Top 1 Percent** | 52.8% | 32.8% | 66.1% |
| **Top 0.1 Percent** | 33.4% | 17.1% | 44.2% |

Source: TPC microsimulation model.

[1] Standard long-run distribution for the baseline corporate income tax burden under the updated incidence assumptions (column 2 of Table 6).

[2] Corporate income tax burden on the normal return (50% labor and 50% all capital) under the updated incidence assumptions (computed from columns 1 and 2 of Table 2).

[3] Corporate income tax burden on supernormal returns (corporate equity under the updated incidence assumptions, column 3 of Table 2).

[4] Tax units with losses are excluded from the lowest quintile but included in the totals.

estimate of the progressivity of the corporate income tax has only a modest effect on the estimated progressivity of the total federal tax system.

TPC's updated methodology also applies different incidence assumptions, depending on the nature of changes in the corporate income tax and whether short-run or long-run effects are being analyzed. Corporate tax increases through changes in cost recovery provisions only affect the normal return to capital and have different, less progressive effects on the distribution than the baseline amount of corporate income tax or changes that also affect supernormal returns, such as changes in statutory tax rates. In the short run, the entire burden of a corporate income tax change falls on shareholders and therefore increases in the corporate income tax impose higher burdens on the very top incomes in the short run than in the long run.

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# FOREIGN TAXES AND THE GROWING SHARE OF U.S. MULTINATIONAL COMPANY INCOME ABROAD: PROFITS, NOT SALES, ARE BEING GLOBALIZED

Harry Grubert

*The foreign share of the worldwide income of U.S. multinational corporations (MNCs) has risen sharply in recent years. Data from a panel of 754 large MNCs indicate that the MNC foreign income share increased by 14 percentage points from 1996 to 2004. The differential between a company's U.S. and foreign effective tax rates exerts a significant effect on the share of its income abroad, largely through changes in foreign and domestic profit margins rather than a shift in sales. U.S.-foreign tax differentials are estimated to have raised the foreign share of MNC worldwide income by about 12 percentage points by 2004. Lower foreign effective tax rates had no significant effect on a company's domestic sales or on the growth of its worldwide pre-tax profits. Lower taxes on foreign income do not seem to promote "competitiveness."*

*Keywords: multinational corporations, domestic-foreign tax differentials, income shifting, foreign-source income*

*JEL Codes: F23, H25, H32*

## I. INTRODUCTION AND SUMMARY

Since 1996 the share of the worldwide income of U.S. multinational companies (MNCs) that is declared abroad has increased significantly. This development has received a great deal of attention in the tax press (Sullivan, 2008), and is also reflected in the rather expansive estimates of the revenue that the United States would gain if it adopted formula apportionment (Avi-Yonah and Clausing, 2007).

Data from a linked sample of 754 large nonfinancial U.S.-based MNCs obtained from the Treasury corporate income tax files indicate that the share of aggregate pre-tax worldwide income earned abroad increased from 37.1 percent in 1996 to 51.1 percent

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in 2004.[1] This increase in the foreign share of total income was almost completely in the form of income that is not repatriated from abroad, which rose from 17.4 percent of worldwide income in 1996 to 31.4 percent in 2004. Foreign income here is defined as the equity income before foreign tax of the foreign subsidiaries of U.S. parent corporations. Domestic income is U.S. taxable income less dividends from abroad. It therefore includes royalties and interest received from foreign affiliates because they are deductible in the host country and included in the current U.S. tax base.

The objective of this paper is to use the firm level data to better understand the role of tax incentives in this dramatic change in the foreign share of worldwide MNC income. In particular, how would the foreign share of income be different if corporate foreign income were subject to accrual taxation at the normal 35 percent tax rate applied to domestic income? Tax differentials can provide incentives to increase investment abroad, and to shift income through transfer price manipulation, the location of company debt, and other mechanisms. These differences between domestic and foreign tax burdens have widened in part because of the greater opportunities for foreign tax planning made possible by several new regulations introduced in 1997.

After a brief review of recent papers that address some of these issues, the paper describes the data used in the empirical work, in particular how the foreign share of income and the average effective foreign tax rate are computed. These data are then used to estimate the effect that a company's average effective foreign tax rate has on its foreign share of worldwide income. Furthermore, because a company's foreign share of income can change either because of a change in the share of its worldwide sales abroad or in its foreign and domestic profit margins, these are also analyzed separately.

Various specifications and samples are used in the firm level analysis. One sample includes companies with worldwide losses in either 1996 or 2004, and the other sample excludes them so that foreign shares of worldwide income can be computed. Regressions are estimated for both the *change* in profit margins and sales and their *levels* in a given year. One series of regressions evaluates the role of intangible assets in facilitating income shifting. Another allows the sensitivity of foreign income shares and profit margins to tax differentials to change over time. The results consistently show that tax differentials have a significant impact on the foreign share of a company's worldwide income abroad, primarily through a change in profit margins rather than changes in the locations of sales. Furthermore the mobility of profits and sales in response to tax differentials seems to have increased over time.

An important question is the extent to which a decline in foreign tax rates affects the domestic economy. Does such a decline lead to a reduction in domestic sales or a decline in domestic profit margins? A fall in foreign tax rates can increase the share of worldwide income abroad but that may simply reflect greater sales and income abroad without implying any reduction in U.S. domestic income. On conceptual grounds,

[1] As described in greater detail at the end of the paper, data published by the Bureau of Economic Analysis (BEA) of the U.S. Commerce Department show that foreign profits have continued to rise substantially as a percentage of total national profits since 2004.

foreign and domestic investment could be net substitutes or complements. In the firm level analysis, it is difficult to identify any significant positive or negative effect of lower effective foreign tax rates on domestic sales. Furthermore, lower foreign tax burdens have no impact on companies' worldwide profit growth from 1996–2004.

The paper then uses the firm level results to estimate the extent to which tax differentials contributed to the 14.0 percentage point increase in the foreign share of *aggregate* worldwide multinational income. It is first necessary to link the firm level evidence and the sample aggregates. The foreign share of aggregate MNC income can increase in two ways: because the companies with a high initial foreign income share grew faster worldwide than the average, or because the average company in terms of initial worldwide income increased its foreign income share over the period. Specifically, the change in the foreign share of aggregate worldwide MNC income can be expressed as the sum of two components: the change in each MNC's foreign share weighted by its initial 1996 share of worldwide income, and the change in each MNC's share of worldwide income weighted by its initial foreign share.

Each of the terms in these two components, including the weights, can be influenced by the foreign-domestic tax differential. For example, a large difference between a company's foreign and domestic effective tax rates in 1996 may have already raised its 1996 foreign share of income.

Because the various specifications and samples yield different quantitative estimates of the response of profit margins and sales to tax differentials, we present a range of estimates. A specification that allows for the tax sensitivity of sales and income to increase over time suggests that the combined effect of U.S.-foreign tax differentials in 1996 and the widening of those differentials from 1996 to 2004 increased the foreign share of total MNC worldwide income by about 12 percentage points.

Finally, because of the important changes in the U.S. tax treatment of foreign income after 1996, which are described in detail below, the paper attempts to identify the role they played in companies' ability to achieve greater reductions in their foreign effective tax rates. The introduction of the check-the-box provisions in 1997, which facilitated the shifting of income from high tax to low tax countries, seems to have accounted for 1 to 2 percentage points of the 5.0 percentage point decline in average foreign effective rates. The "active finance exception," which reinstituted deferral for income from active financial business abroad, accounts for about an additional 0.5 percentage point of this reduction.

We also include a section on qualifications and caveats because of limitations in the data and analysis that may bias the results. The final section summarizes the conclusions of the analysis.

## II. RELATIONSHIP TO THE LITERATURE

The literature on the relationship between tax rates and the location of direct investment and income goes back at least to Grubert and Mutti (1991) and Hines and Rice (1994). The large number of subsequent studies is summarized recently in Organisation

for Economic Co-operation and Development (OECD) (2008). Most of these studies are based on a cross section of host countries with varying tax rates. It is therefore impossible to determine whether high profit rates in a low tax location, such as Ireland, reflect income shifting from either corporations based in the United States or from their subsidiaries in high tax foreign countries. Similarly, there has been very little analysis of the effect of foreign-domestic tax differentials on increases or decreases of economic activity in the United States.

Two very recent papers are particularly relevant for the analysis in this paper. Clausing (2009) attempts to estimate the total amount of income shifted out of the United States using data published by the BEA. But, in contrast to the analysis here, the estimate is not based on the observed relationship between average foreign tax rates and domestic profit margins and sales. As in much of the income shifting literature, Clausing's statistical analysis is based on a cross-section of host countries for U.S. direct investment and the effective tax rates in those locations. After estimating the total income shifted to the low tax locations in the cross-section, Clausing then calculates how much of that is attributable to income shifted from the United States. This estimate is based on a comparison of how much subsidiaries trade with their parents and how much they trade with related parties in other foreign locations. Apart from being purely mechanical and somewhat arbitrary, this procedure ignores the fact that most income shifting from the United States is probably due to "non-transactions," i.e., subsidiaries paying inadequate royalties for U.S.-developed intellectual property.

Desai, Foley, and Hines (2009) examine whether MNC investment abroad comes at the expense of investment at home. The direction of causation always arises as a problem when investigating this question because, for example, successful companies tend to expand everywhere. Furthermore, the relationship between foreign and domestic investment varies depending on the reason for the increased foreign investment. There could be various reasons, including the growth of foreign markets, lower costs abroad including taxes, or high trade barriers making exporting from the United States difficult. The authors address the causality issue by using host country GDP growth as an instrument for companies' foreign investment. They find that greater foreign investment is associated with greater domestic investment. But it is not surprising that GDP growth abroad results in greater MNC exports of U.S. components and headquarters services. However, the Desai, Foley, and Hines findings have no bearing on whether an increase in U.S. taxes on foreign income would decrease domestic investment. Changes in foreign and domestic tax rates, or changes in any other relative cost variables, are not considered in their analysis.

In contrast, this paper uses foreign-domestic tax differentials to address the question of how taxes affect decisions by MNCs on where to locate investment and income. Using U.S. Department of the Treasury corporate tax files described in the next section, each MNC's average effective foreign tax rate is calculated, aggregating income and taxes paid across all its foreign subsidiaries. The resulting cross-sectional variation in companies' foreign-domestic tax differentials then identifies the extent to which lower foreign tax rates cause the shifting of income and economic activity in or out of the United States.

## III. DESCRIPTION OF THE DATA AND EMPIRICAL STRATEGY

### A. Data

A match of the 1996 and 2004 Treasury corporate tax files is the basis for identifying the sources of the increased share of MNC income abroad. These files include information from Form 1120 which is the basic corporate return, Form 1118 on which foreign tax credits are claimed, and Form 5471 which provides operating and balance sheet data for each of the company's controlled foreign corporations (CFCs). The total linked sample includes 754 nonfinancial corporations and 111 financial corporations. Most of the analysis concentrates on nonfinancial companies, which account for 88 percent of the foreign income in the sample in 2004. (A brief summary of the data on financial companies is contained in Appendix A.) The 865 companies we are able to link accounted for about 80 percent of total foreign MNC income in 2004.

The files are used to compute each MNC's average effective foreign tax rate in 1996 and 2004. Company foreign effective tax rates are computed from the total foreign taxes paid by subsidiaries in relation to pre-tax Earnings and Profits (E&P), a measure defined in the internal revenue code that approximates book income.[2] In summing subsidiary E&P we net out dividends that a subsidiary receives from a lower tier subsidiary to avoid double counting. As noted above, domestic income is defined as all pre-tax domestic taxable income reported on Form 1120, less dividends received from abroad. It therefore includes royalties and interest received from subsidiaries because they are included in the current U.S. tax base and deductible from host country tax abroad.[3] In contrast, foreign income can potentially be deferred.

We use the change in parent level average foreign effective tax rates rather than average statutory rates because the change in the effective foreign tax rate, i.e., total foreign taxes paid in relation to total pretax foreign income, can reflect the company's own tax planning efforts, such as shifting income from high tax countries to tax havens. This type of income shifting was greatly facilitated by regulations introduced in 1997. (These regulations are described in greater detail below in the analysis of the sources of the decline in effective foreign tax rates.) Prior to 1997, payments of interest and royalties from one subsidiary to another subsidiary would generally be subject to current U.S. tax under the anti-abuse CFC rules.[4] The 1997 regulations had the effect of allowing companies to defer this current U.S. tax until the funds were repatriated to

[2] The effective foreign tax rates are computed from the company's CFCs that have positive profits. They may therefore not be a good measure of the company's long run incentives if there are large losses in other CFCs.

[3] Including repatriated dividends in domestic income as well was a possibility because they are also part of the domestic tax base. As indicated above, the increase in the share of worldwide income deferred abroad was virtually identical to the increase in the foreign share. But this would have necessitated an analysis of the repatriation decision, which is beyond the scope of this paper.

[4] The current tax does not apply if the income is subject to foreign tax greater than 90 percent of the top U.S. corporate rate.

the U.S. parent. Because of this newfound ability to shift income from one country to another, there may be little relation between where a subsidiary is incorporated and where its income is located. It is therefore impossible to obtain weights for a composite measure based on country statutory tax rates. Accordingly, the average effective foreign tax rate is the best available indicator of the incentive to locate both economic activity and income abroad.[5]

On the domestic side, the U.S. statutory tax rate on corporate income remained at 35 percent from 1996 to 2004. As discussed in detail below, the changes in tax provisions over that period, such as those governing depreciation, were not large enough to have a significant effect on domestic effective tax rates. In any case, the 35 percent statutory rate is the most relevant rate for analyzing income shifting between the United States and foreign locations, as income that is shifted is taxed at the statutory rate. The average effective foreign tax rate is used on the foreign side because it is the best indicator of the relevant statutory rates.

The corporate tax files were used to construct basic company characteristics such as date of incorporation and total sales. Parent advertising expenses were taken from Form 1120. Research and development (R&D) expenditures were based on Qualified Research and Experimentation reported on the corporate return for the purposes of the Research and Experimentation (R&E) credit. This tends to be smaller than the amount of R&D stated on financial reports, in part because of rules specifying which expenditures qualify for the credit, and also because the R&E must be performed in the United States. In the small number of cases in which no credit is claimed but R&D is reported in Compustat, an imputation is made based on the Compustat entry.

In the empirical analysis, profit margins on sales are used as the profitability indicators and sales are used as the activity measure and investment proxy at home and abroad. The reason for the use of sales rather than assets or tangible capital is that the asset data in the Treasury files, and in particular the balance sheet on the parent's Schedule L, are unreliable. The main problem for the purposes of this paper is uncertainty about how foreign assets are included in total Schedule L assets. For example, some companies apparently report net equity in foreign subsidiaries and others include gross foreign assets on the asset side and foreign debt on the liability side. It is therefore difficult to calculate a valid measure of domestic assets. In contrast, the U.S. parent's own sales are given at the top of its Form 1120, and sales by each of its CFCs are reported on its Form 5471.

While reliable asset data might be preferred if available, the use of sales has some advantages. Unlike assets, sales are not subject to historical book value distortions. In addition, while self-developed intangible assets like patents and trademarks are usually carried at a zero basis on corporate balance sheets, their contributions to production are

[5] The country-by-country foreign income data published by the BEA in the U.S. Commerce department also does not reliably identify the country in which taxable income is located. As shown by Altshuler and Grubert (2005), a substantial fraction of the huge volume of inter-affiliate payments going to holding companies in tax havens is deductible in the country in which the income originates.

reflected in sales values, which is very useful since these assets play the critical role in cross-border investment.

### B. Empirical Strategy

Companies can have different average effective foreign tax rates because they have different opportunities for the location of their activity. In other words, some companies' choice of location is more responsive to tax differences.[6] For example, mobile high tech companies that serve a worldwide market can easily locate in low tax jurisdictions. On the other hand, some companies find it more efficient to locate close to their customers, even if they reside in a high tax country.

Companies can also have lower foreign effective tax rates if they shift income from high to low tax countries. Firms that engage in more aggressive tax planning will have lower average effective foreign tax rates; that is, for a given difference in country tax rates, such firms will shift more income from the high tax country to the low tax country.

Greater sensitivity of investment location to local tax rates and more aggressive income shifting can create a relationship between observed average foreign tax rates and the foreign share of MNC income, either because a greater share of worldwide activity is located in low tax countries or because more of worldwide income is located there. Moreover, the location of investment and income reinforce each other. If a company invests in low tax locations, it has greater opportunities for shifting income there, further increasing the foreign share of income and lowering effective foreign tax rates. Aggressive tax planners lower foreign tax burdens, which in turn promotes more foreign investment.

We hope to identify this relationship between average effective foreign tax rates and the foreign share of income. Note that a relationship between average effective foreign tax rates and foreign profit margins would be observed only if there is income shifting from the United States. Shifting income from high tax foreign countries to low tax foreign countries would not affect pre-tax foreign or domestic profit margins, since such income remains within consolidated foreign income.

We use this observed relationship between effective foreign tax rates and foreign shares of income, and between foreign tax rates and domestic sales and profit margins, to estimate the impact of eliminating the tax incentives to invest and shift income abroad, for example, by eliminating the deferral privilege for active income abroad. Eliminating deferral would remove all tax incentives to locate income and activity in countries with tax rates below the rate in the United States, as all the factors that create the relationship between the foreign share of income and effective foreign tax rates would no longer be operative. The effects of differences in average foreign tax rates would disappear as all worldwide income would be currently subject to the U.S. tax rate. The companies that are in a position to take the greatest advantage of lower foreign tax rates under

[6] For convenience, we sometimes refer to "foreign tax rates" and "average foreign tax rates," but in all cases "average effective foreign tax rates" is intended as the meaning.

current law would have no more reason to shift income or locate activity abroad than those that cannot, or choose not to, take advantage of lower foreign rates. Even if the observed relationship between domestic profit margins and average foreign tax rates is due exclusively to different degrees of aggressiveness in income shifting to low tax countries, the estimated coefficient will reveal the impact of removing the opportunities for lower foreign rates. The profit margins of aggressive and non-aggressive MNCs would be similar.[7]

## IV. THE IMPACT OF EFFECTIVE FOREIGN TAX RATES ON THE FOREIGN SHARE OF INCOME AND DOMESTIC AND FOREIGN PROFIT MARGINS

### A. Different Samples and Specifications

The question to be investigated is the extent to which a lower effective foreign tax rate induces an increase in the share of a company's worldwide income abroad, and further how any increase is split between a shift in sales and a shift in profit margins. This will be identified mainly from the relationship between *changes* in foreign income shares, profit margins and sales on the one hand, and the *change* in effective foreign tax rates on the other. This has the advantage of controlling for unmeasured company characteristics that could bias the results. One specification includes the interaction of the parent's R&D intensity and the change in its effective foreign tax rate to examine the role of intellectual property in contributing to income shifting. In addition we also introduce a specification that permits the tax responsiveness parameters to change over time, for example, because of heightened capital mobility or more aggressive tax planning over time. It is therefore useful to look at a regression based on the levels of the variables in 2004 to see if the results are consistent with the final transformed tax elasticities derived from this more flexible specification.

The regressions will be presented for two related samples. The first sample includes companies that may have worldwide losses in one or both of the two years analyzed. The only requirement is that companies reported foreign and domestic sales so that profit margins can be computed. (This requirement has virtually no impact on the aggregate change of the foreign share of income earned by the companies remaining in the sample, which is still 14.0 percentage points.) This sample contains 622 companies. The second sample, which excludes companies with worldwide losses in any of the two years so that foreign income shares can be computed, contains 415 parent-level observations.

In addition to the average effective foreign tax rate, the independent variables in the regressions include other possible determinants of the company's foreign income share. The ratio of parent R&D to sales and the ratio of advertising to sales are indicators of the levels of company intangible assets, which may increase the opportunities for profitable

[7] The apparent endogeneity issues raised by the use of the observed relationship between the foreign share of an MNC's income and its effective foreign tax rate are discussed more fully at the end of the paper.

investment abroad. Regressions not displayed show that R&D and advertising have a statistically significant impact on worldwide profit margins.

Other independent variables are a dummy for companies incorporated after 1980 and a measure of the company's worldwide size in 1996. Less mature companies might be expected to have a smaller initial share of income abroad but their foreign share may rise more rapidly. Furthermore, large companies may have opportunities or handicaps different from smaller companies. (A table with the means of the variables used in the analysis is provided in Appendix B.)

In addition, the regressions for foreign and domestic profit margins include the worldwide profit margin as an independent variable. This variable measures the total pool of worldwide profits that can potentially be located either at home or abroad, while the effective foreign tax rate reflects the incentive for choosing one location rather than another. Apart from tax considerations, a company's profitability would be expected to be similar at home and abroad. The worldwide profit margin also controls for the possible correlation between worldwide profitability and effective foreign tax rates. Profitable high tech companies may tend be more mobile and locate in low tax countries. They may also have the opportunity for more aggressive tax planning. In fact, the negative correlation between effective foreign tax rates and worldwide profit margins is highly significant in 2004. R&D intensive companies obtained significantly greater reductions in effective foreign tax rates from 1996 to 2004. Excluding the worldwide profit margin as an explanatory variable in the profit margin equations could therefore result in serious omitted variable bias in the estimates of the tax coefficients.

### B. Empirical Results

Table 1 presents the results of seven regressions estimating the changes in the shares of income, profit margins, and sales in response to changes in average effective foreign tax rates and other variables. The sample in Table 1 is limited to companies with positive worldwide profits in both years. The first regression shows that a change in a company's effective foreign tax rate has a large and statistically significant impact on its foreign share. The –0.436 coefficient, statistically significant at the 1 percent level, indicates that a 10 percent decline in the effective foreign tax rate would increase the foreign share of income by more than 4 percentage points.

Regressions 2 and 3 show that a reduction in effective foreign tax rates has a statistically significant effect on domestic and foreign profit margins. A lower foreign tax burden reduces the domestic profit margin while raising the foreign profit margin. Moreover the impact of a change in foreign effective tax rates is quantitatively significant. A 10 percentage point reduction in the effective foreign tax rate raises the foreign profit margin by 0.9 percentage points or about 10 percent of the 1996 mean. The domestic profit margin falls by almost as much, 0.75 percentage points. If income is shifted from the United States abroad because of the lower foreign tax rate, we would expect the foreign margin coefficient to be somewhat larger than the domestic margin coefficient in absolute value but opposite in sign, because domestic sales tend to be larger than foreign sales.

**Table 1**

Changes in Foreign Share of Income, Profit Margins, and Sales
(1996–2004)

| | Dependent Variables | | | | | | |
|---|---|---|---|---|---|---|---|
| Independent Variables | Change in Foreign Share of Income (1) | Change in Domestic Profit Margin (2) | Change in Foreign Profit Margin (3) | Change in Foreign Share of Total Sales (4) | Change in Foreign Share of Income (5) | Change in Log of Domestic Sales (6) | Change in Log of Foreign Sales (7) |
| Change in average effective foreign tax rate | –0.436*** (0.136) | 0.075*** (0.029) | –0.090** (0.045) | –0.0736 (0.0492) | –0.370*** (0.135) | 0.173 (0.226) | 0.334 (0.420) |
| Parent R&D/sales, 2004 | 0.875 (1.71) | –0.641** (0.268) | 0.555 (0.503) | 0.440 (0.616) | –0.277 (1.27) | 4.65 (2.83) | 2.69 (5.27) |
| Parent advertising/sales, 2004 | –1.10* (0.62) | 0.307** (0.148) | 0.046 (0.185) | –0.394* (0.225) | –1.50** (0.690) | –0.221 (1.03) | –2.34 (1.92) |
| Incorporation after 1980 | –0.101* (0.052) | –0.0048 (0.0108) | 0.0164 (0.0152) | 0.004 (0.019) | –0.113** (0.051) | 0.73 (0.085) | 0.091 (0.159) |
| Size: log of sales, 1996 | –0.071*** (.019) | 0.0157*** (0.0039) | –0.0147*** (0.0055) | –0.0129* (0.0067) | –0.062*** (0.018) | –0.048 (0.031) | –0.094 (0.058) |
| Change in worldwide profit margin | | 0.721*** (0.062) | 0.533*** (0.088) | | | | |
| Change in foreign share of sales | | | | | 0.565*** (0.136) | | |

Notes: Robust standard errors are in parentheses. The number of observations is $N = 415$. The sample is limited to nonfinancial parent companies with positive worldwide income in both years. The change in the average foreign tax rate is the foreign effective tax rate in 2004 minus the foreign effective tax rate in 1996. The mean change is negative. Similarly, the change in the foreign share is the foreign share in 2004 minus the foreign share in 1996. The R&D and advertising variables refer to parent level R&D and advertising expenditures relative to domestic sales. The incorporation dummy variable is an indication of recently established companies. The log of worldwide sales is a measure of corporate size. The profit margins are the ratio of net income to sale. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

The statistically significant negative coefficient for company R&D intensity is noteworthy in the second regression. Domestic profit margins of high tech companies tended to decline from 1996 to 2004. The R&D variable has a positive coefficient in the foreign profit margin regressions but the estimates are not statistically significant. The role of R&D is examined further in Table 3 to see if it facilitates the shifting of income from the United States.

The relationship between the foreign share of income and foreign effective tax rates could in part be attributable to a shift in the composition of worldwide sales. But regressions 4 and 5 show that the change in the geographical composition of sales plays at most a minor role. In regression 4 for the change in the foreign share of worldwide sales, the change in the effective foreign tax rate is not statistically significant. In regression 5 where the change in the foreign share of sales is added as an explanatory variable in the change in foreign share of income regression, the sales share is statistically significant but the size and statistical significance of the change in foreign tax variable is not much affected (–0.370 compared to –0.436 in column 1). It is the effect of effective foreign tax rates on domestic and foreign profit margins that is important, not their effect on foreign and domestic sales.

We can also look at foreign and domestic sales separately to shed light on the long-standing controversy regarding the impact of foreign direct investment on the domestic economy. Is it the "export of jobs" view, as embodied in various legislative proposals to restrict "runaway plants," or the "foreign investment is good for America" view, as expressed by Desai, Foley, and Hines (2009), that turns out to be valid?[8] The answer to this question on the relationship between MNC foreign activity and the domestic economy depends on why foreign investment expands. Increased investment abroad because of growing foreign economies may have an effect on domestic output different from foreign investment increasing in response to lower effective foreign tax rates. Since the question is usually posed to guide U.S. tax policy, it is necessary to observe the actual domestic response to changing foreign tax burdens.

When examining the change in the log of domestic sales (regression 6), the change in the foreign tax rate coefficient is positive, indicating that a reduction in foreign tax rates reduces domestic sales, but the estimate is not statistically significant. The difficulty in identifying any significant positive or negative effect of lower foreign tax rates on domestic sales suggests that the positive effects, such as the increase in component exports to affiliates, offset the possible negative effect in the form of a shift in activity to foreign locations. Neither the "export of jobs to low tax locations" view nor the "low tax burdens on MNC income abroad increase domestic investment" view seems to have strong empirical support.[9]

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[8] Sullivan (2010) presents anecdotal evidence in support of the "export of jobs" view based on the activity of a single company.

[9] The papers summarized in OECD (2008) indicate a significant impact of effective tax rates on the location of investment, but most of this evidence is based on the choice among foreign locations. The evidence on the choice between the home country and a foreign location is much weaker, particularly on whether the expansion abroad reduces expansion at home.

Regression 7 indicates that changes in the effective foreign tax rate also did not seem to have any statistically significant effect on foreign sales. As in the case of domestic sales, the tax coefficient is not statistically significant. One possible reason that lower foreign tax burdens do not have an effect on real activity is that companies can exploit lower tax rates by shifting income. Shifting investment and shifting income may be substitutes.

Looking at the size and post-1980-incorporation variables in the regressions presented in Table 1, we see that bigger companies tended to have larger increases in domestic profit margins and smaller increases in foreign profit margins. In both cases the size coefficients were statistically significant. Therefore, the foreign income shares of bigger companies increased less than smaller companies. Companies incorporated after 1980 had smaller increases in domestic profit margins and larger increases in foreign profit margins, although in this case the coefficients were generally not statistically significant.

Consistent with the firm level results for profit margins, the sample indicates that from 1996 to 2004 there was a major shift in domestic and foreign profit margins. The foreign (unweighted) mean profit margin increased by more than 5 percentage points, almost doubling, while the domestic margin declined by more than 3 percentage points (Appendix B, Table B1). Mean worldwide profit margins were virtually unchanged.

Table 2 replicates some of the analysis in Table 1 for the larger sample, which includes companies that had worldwide losses in one or both of the two sample years. The major difference is that in this case there can be no analysis of changes in the foreign income share. The results in the change of domestic and foreign profit margin regressions in the first two regressions are similar to those presented in Table 1. The changes in effective tax rate coefficients are each statistically significant at least at the 5 percent level, although they are somewhat smaller in absolute value than those presented in Table 1. It may be that the tax effects are smaller when companies with worldwide losses are included because decision making changes when there are worldwide losses. For example, if a company has a domestic loss and foreign profits, it would want to shift income back to the domestic operation to utilize the loss even if the foreign tax rate is much lower. Furthermore, the foreign effective tax rate measure is less meaningful if there are foreign losses. As described earlier, the measure we use is constructed from the CFCs that have positive income, but this may not give an accurate picture of the companies' long run incentives.

Previous work has suggested that the presence of intangibles greatly facilitates the shifting of income. For example, using data on subsidiaries in various foreign countries, Grubert (2003) finds that the shifting of intangible income and the allocation of debt explain almost all of the differences in profitability in response to taxes. Therefore, Table 3 presents profit margin regressions in which the interaction of the company's R&D intensity and the change in its average effective foreign tax rate is added as an independent variable; that is, this variable investigates whether R&D-intensive companies have a greater opportunity to exploit low foreign tax rates.

**Table 2**

Changes in Profit Margins and Sales
(1996–2004)

| | Dependent Variable | | |
|---|---|---|---|
| Independent Variables | Change in Domestic Profit Margin (1) | Change in Foreign Profit Margin (2) | Change in Log of Domestic Sales (3) |
| Change in average effective foreign tax rate | 0.039*** | –0.056** | 0.239 |
| | (0.018) | (0.028) | (0.180) |
| Parent R&D/sales 2004 | –1.02*** | 0.180 | 1.97 |
| | (0.28) | (0.432) | (2.80) |
| Parent advertising/sales 2004 | –0.068 | 0.017 | –0.101 |
| | (0.120) | (0.185) | (1.20) |
| Incorporation after 1980 | –0.000 | 0.013 | –0.012 |
| | (0.008) | (0.013) | (0.082) |
| Size: log of sales 1996 | 0.010*** | –0.0086* | –0.076** |
| | (0.003) | (0.0049) | (0.031) |
| Change in worldwide profit margin | 0.657*** | 0.519*** | |
| | (0.039) | (0.060) | |

Notes: Robust standard errors are in parentheses. The number of firms is $N = 622$. The sample includes companies with worldwide losses in 1996 or 2004. The only requirement is that they report foreign and domestic sales so that profit margins can be computed, which explains the decrease to 622 companies from the original sample of 754. Only nonfinancial parent companies are included. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

These results generally support the hypothesis that R&D-based intangibles facilitate income shifting. The first two regressions in Table 3 use the sample in Table 1 that was restricted to companies with positive worldwide income in both 1996 and 2004. The coefficient of the foreign tax rate-R&D interaction in the first regression has the expected positive sign but it is not statistically significant by normal standards. However, the coefficient of the change in foreign tax rate-R&D interaction term is highly statistically significant in the regression 2, which examines the change in the foreign profit margin. Furthermore, in regressions 2 and 3, which use the expanded sample including companies with worldwide losses, the coefficients for the change in foreign

**Table 3**

The Importance of Intangible Assets

| | Dependent Variables | | | |
|---|---|---|---|---|
| Independent Variables | Change in Domestic Profit Margin (1) | Change in Foreign Profit Margin (2) | Change in Domestic Profit Margin (3) | Change in Foreign Profit Margin (4) |
| Parent R&D/sales | –0.676* | 0.367 | –1.10*** | 0.223 |
| | (0.365) | (0.514) | (0.28) | (0.429) |
| Parent advertising/sales | –0.152 | 0.029 | –0.068 | 0.017 |
| | (0.132) | (0.186) | (0.118) | (0.184) |
| Incorporation since 1980 | –0.007 | 0.0142 | 0.000 | 0.0146 |
| | (0.011) | (0.0153) | (0.008) | (0.0126) |
| Size: log of sales 1996 | 0.0169*** | –0.0154*** | 0.010*** | –0.0093 |
| | (0.0039) | (0.0056) | (0.003) | (0.0048) |
| Change in worldwide profit margin | 0.742*** | 0.533*** | 0.663*** | 0.507*** |
| | (0.063) | (0.089) | (0.039) | (0.060) |
| Change in average effective foreign tax rate | 0.054 | –0.027 | 0.019 | –0.009 |
| | (0.035) | (0.050) | (0.020) | (0.032) |
| Change in average effective foreign tax rate * R&D/sales | 2.48 | –4.91** | 2.79** | –4.87*** |
| | (1.57) | (2.22) | (1.29) | (1.69) |

Notes: Robust standard errors in parentheses. Regressions 1 and 2 are based on the sample of 415 companies that had positive worldwide income in both 1996 and 2004. Regressions 3 and 4 are based on the larger sample of 622 companies. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

tax-R&D interaction term are highly significant for both the domestic and foreign profit margins. Intangible assets created by R&D permit companies to take greater advantage of a relatively low foreign tax rate.[10] Since the intangibles are created in the United States, the results confirm the findings in Tables 1 and 2 that lower foreign tax burdens increase the shifting of income from the United States.[11]

[10] They may also help a company achieve a lower tax rate.

[11] As noted previously, the R&D used in this analysis is the amount that qualifies for the R&E credit and must be performed in the Unites States. In fact, R&D performed in the United States accounts for the overwhelming portion of company R&D. For example, Yorgason (2007) indicates that in 2004 U.S. parents performed 85 percent of total MNC R&D.

As suggested at the beginning of the paper, companies can become more responsive over time to a given tax differential, for example, by shifting income more aggressively. This can be tested by adding the initial 1996 foreign tax rate to the change in foreign share regression.[12] The regression results presented in Table 4 explore that possibility. The coefficient of the initial 1996 effective foreign tax rate is a measure of the increased responsiveness of shares and margins to tax differentials. The coefficient of the change in the effective foreign tax rate becomes the final responsiveness parameter after the change.

The first regression in Table 4, for the change in the foreign share, indicates that companies indeed have become more responsive to tax differentials. The 1996 effective foreign tax rate is statistically significant at the 5 percent level, indicating a substantial increase in companies' sensitivity to tax differentials. Further, the coefficient of the basic change in the effective foreign tax rate becomes much larger in absolute value and more statistically significant compared to the Table 1 regression based on the same sample. This might be expected because it is the *final* tax response coefficient after the increased sensitivity to tax rates has taken place.

The remaining regression results displayed in Table 4 show that the greater sensitivity of the foreign share to the tax differential seems primarily attributable to changes in domestic profit margins and in the foreign share of worldwide sales. The second regression shows that the 1996 effective foreign tax rate had a significant impact on the change in domestic profit margins from 1996 to 2004. The coefficient is significant statistically at the 5 percent level with a positive sign as expected. In addition, the coefficient for the change in the effective foreign tax rate is much larger, almost twice the comparable coefficient in Table 1. But, surprisingly, the effective foreign tax rate in 1996 is not significant in the regression for the change in the foreign profit margin, although the coefficient of the change in the foreign tax rate variable is larger in absolute value than in the results presented in Table 1.[13]

The fourth regression in Table 4 shows that the tax sensitivity of the foreign share of sales also increased. The coefficient for the average effective foreign tax rate in 1996 is negative and statistically significant. The last two regressions indicate that this is attributable to the increase in foreign sales, not the decrease in domestic sales, although the effect does not seem very large.

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[12] This specification is suggested by starting with an equation in which the foreign share is a function of an elasticity parameter and the tax differential, and then taking the derivative of the foreign share with respect to time while allowing changes in both the tax differential and the elasticity. This can also be seen for discrete changes by subtracting a 1996 level equation from a 2004 equation, allowing the tax coefficients in each year to be different. This methodology was used in Altshuler, Grubert, and Newlon (2001).

[13] One possible explanation for the significant negative coefficient for the 1996 effective tax rate in the Table 4 regressions is the enactment in 2004 of the one-year tax holiday for dividend repatriations. In 2005, dividends could be repatriated at the low tentative U.S. tax rate of 5.25 percent compared to the normal 35 percent, with a proportionately scaled down foreign tax credit. Enactment of this provision became an active possibility as early as 2002. Firms therefore may have put a lower tax cost on income deferred in low tax locations abroad.

**Table 4**

Did Sensitivity to Tax Differentials Increase?

| | Dependent Variables | | | | | |
|---|---|---|---|---|---|---|
| Independent Variables | Change in Foreign Share of Income (1) | Change in Domestic Profit Margin (2) | Change in Foreign Profit Margin (3) | Change in Foreign Share of Sales (4) | Change in Log of Domestic Sales (5) | Change in Log of Foreign Sales (6) |
| R&D/sales 2004 | 0.383 | –0.742** | 0.161 | 0.374 | 4.83* | 2.59 |
| | (1.28) | (0.359) | (0.383) | (0.613) | (2.83) | (5.29) |
| Advertising/sales 2004 | –1.46** | –0.171 | 0.006 | –0.374* | –0.218 | –2.12 |
| | (0.70) | (0.132) | (0.211) | (0.224) | (1.03) | (1.93) |
| Incorporation after 1980 | –0.112** | –0.0072 | 0.016 | 0.0022 | 0.045 | 0.034 |
| | (0.051) | (0.0109) | (0.015) | (0.0184) | (0.085) | (0.159) |
| Size: log of sales 1996 | –0.074*** | 0.0171*** | –0.0150*** | –0.0144** | –0.051 | –0.110* |
| | (0.019) | (0.0039) | (0.0056) | (0.0061) | (0.031) | (0.058) |
| Change in worldwide profit margin | | 0.762*** | 0.532*** | | | |
| | | (0.063) | (0.090) | | | |
| Change in average effective foreign tax rate | –0.704*** | 0.142*** | –0.101* | –0.181*** | 0.173 | –0.267 |
| | (0.188) | (0.040) | (0.057) | (0.067) | (0.311) | (0.582) |
| Average effective foreign tax rate 1996 | –0.546** | 0.1019** | –0.016 | –0.198** | –0.109 | –1.35* |
| | (0.237) | (0.0506) | (0.072) | (0.086) | (0.395) | (0.739) |

Notes: Robust standard errors are in parentheses. The number of observations is N = 415. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

This pattern of increased sensitivity to tax rates is also evident in comparable profit margin regressions, which are not displayed, that are based on the expanded sample in which companies with worldwide losses are included. The absolute size of the change in average effective tax rate coefficients in both the domestic and foreign profit margin regressions almost doubles. It therefore appears that the initial 1996 effective foreign tax rate is an important omitted variable in the earlier regressions presented in Tables 1–3, and that those results seriously underestimate the importance of tax differentials.

In contrast to the first four tables in which the 1996 to 2004 changes in the foreign share and profit margins are the dependent variables, Table 5 presents the results of regressions for the *level* of companies' foreign share and profit margins in 2004. As in Table 1, the sample is restricted to the companies that had positive worldwide income in both 1996 and 2004. Again the focus is on the impact of the company's effective foreign tax rate, which has a highly statistically significant impact on the company's foreign share of income, and its domestic and foreign profit margins. The tax coefficients tend to be much larger in absolute value than the comparable coefficients for the change in the effective foreign tax rate in the regressions presented in Table 1. The coefficients for the R&D-foreign tax rate interaction terms in regressions 4 and 5 for the domestic and foreign profit margins are also much larger and more significant. These quantitatively more significant responses to tax differentials in 2004 are consistent with the results in Table 4, indicating that the tax sensitivity of the foreign share of income and profit margins has increased over time. Indeed, the –0.914 effective foreign tax rate coefficient in the first regression in Table 5, for the foreign share of income, is similar to the –0.704 coefficient in Table 4 that represents the final tax sensitivity of the foreign share of income. (The tax effects in 2004 regressions using the sample that includes companies with worldwide losses, which are not displayed, are closer to those presented in Table 1.)

### C. Summarizing the Range of the Tax Impacts

The results in Tables 1–5 can be used to estimate the impact of foreign-domestic effective tax differentials on the foreign share of MNC income. The regressions consistently indicate that a company's effective foreign tax rate has a significant impact on the foreign share of its worldwide income, and on its domestic and foreign profit margins in particular. The results also support the hypothesis that opportunities for tax-induced income shifting are strongly influenced by the presence of intangible assets. However, the size of the tax effect varies depending on the sample and the specification.

We can illustrate the range of possible impacts by starting with the initial 1996 tax differential. The highly significant –0.436 coefficient for the change in effective foreign tax rates in the results of the first regression presented in Table 1 indicates that the approximate 10 percentage point differential between foreign and domestic effective tax rates in 1996 raised the foreign share of MNC income by more than 4 percentage

**Table 5**

Foreign Share of Income and Profit Margins in 2004

| | Dependent Variables | | | | |
|---|---|---|---|---|---|
| Independent Variables | Foreign Share of Worldwide Income (1) | Domestic Profit Margin on Sales (2) | Foreign Profit Margin on Sales (3) | Domestic Profit Margin on Sales (4) | Foreign Profit Margin on Sales (5) |
| Parent R&D/sales | 2.45* | –0.252 | –0.734** | –1.36*** | 0.992 |
| | (1.28) | (0.216) | (0.368) | (0.387) | (0.662) |
| Parent advertising/sales | 0.059 | 0.465*** | –0.420** | 0.493*** | –0.464** |
| | (0.233) | (0.117) | (0.172) | (0.116) | (0.199) |
| Incorporation after 1980 | –0.089* | 0.0041 | 0.0080 | 0.0039 | 0.0083 |
| | (0.052) | (0.0085) | (0.0145) | (0.0084) | (0.0143) |
| Size-log of 1996 sales | –0.0192 | 0.0045 | –0.0007 | 0.0051* | –0.0015 |
| | (0.0188) | (0.0031) | (0.0053) | (0.0031) | (0.0053) |
| Average effective foreign tax rate in 2004 | –0.914*** | 0.093*** | –0.127** | 0.023 | –0.018 |
| | (0.188) | (0.031) | (0.053) | (0.037) | (0.063) |
| Worldwide profit margin | | 0.614*** | 1.25*** | 0.622*** | 1.24*** |
| | | (0.053) | (0.091) | (0.052) | (0.090) |
| Average effective foreign tax rate* R&D/sales | | | | 5.92*** | –9.23*** |
| | | | | (1.73) | (2.96) |

Notes: Robust standard errors are in parentheses. The profit margins on sales variables refer to the ratio of profits to sales. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

points by 1996.[14] Furthermore, the results of the last regression presented in Table 1 indicates that the tax coefficient only decreases to –0.370 when the change in foreign sales is added to the regression, showing that the tax impact is almost exclusively through changes in profit margins.

In the regression results presented in Table 2, which include companies with worldwide losses in one or both of the years in the sample, there is no foreign share equation but we can estimate the foreign share from the profit margin equations. The basic tax coefficients for the domestic and foreign profit margins are on average only about 55 percent in absolute value of those for the more restricted sample analyzed in Table 1. On the other hand, the R&D-tax change interaction term coefficients in Table 3 tend to be larger and more significant. But using instead the basic coefficients for the change in the effective foreign tax rate in Table 2, the estimate of the effect of the 10 percentage point tax differential on the 1996 foreign share would therefore be closer to 2.5 percentage points.

The coefficients presented in Table 4, which reflect the specification allowing the sensitivity of foreign shares to change over time, suggest a much larger impact — a 7 percentage point increase in the foreign share of income as a result of the 10 percentage point tax differential. The level regressions for 2004 presented in Table 5 indicate an even larger impact of taxes, with the 10 percentage point tax differential resulting in a 9 percentage point increase in the foreign share of income. The estimated effect of the 10 percentage point domestic-foreign tax differential in 1996 therefore covers a wide range, from 2.5 percentage points to 9 percentage points of worldwide income. Because of the generality of the specification that allows the tax responsiveness to change over time as income becomes more mobile, the 7 percentage point estimate is our preferred estimate.

## V. COMPONENTS OF THE CHANGE IN THE FOREIGN SHARE AND THE ROLE OF TAXES

The firm level results can now be used to estimate the role of foreign-domestic tax differentials in the 14 percentage point jump in the foreign share of total MNC income. But in order to link the firm level data and the change in the foreign share of aggregate MNC income, it is useful to decompose the change in the aggregate share into its constituent parts.

### A. The Decomposition

The initial aggregate foreign share of worldwide income, *S*, can be expressed as the sum of each MNC's foreign share weighted by its share of total worldwide income:

[14] Appendix Table B1 indicates an average effective foreign tax rate in 1996 of 21.3 percent. U.S. General Accountability Office (2008) provides estimates of domestic effective tax rates. When state corporate taxes are included, 10 percentage points may be an underestimate.

$S = \Sigma_i s_i w_i$, where $s$ is the individual MNC's foreign income share and $w$ is the MNC's weight in worldwide income. Taking the derivative of the aggregate $S$ with respect to time and gathering terms we find that

$$(1) \quad \frac{\partial S}{\partial t} = \sum_i w_i \frac{\partial S_i}{\partial t} + \sum_i s_i \frac{\partial w_i}{\partial t}.$$

The first summation term on the right hand side is the change in the individual MNC's foreign share weighted by the MNC's initial share of worldwide income, and the second summation is the change in each MNC's share of aggregate worldwide company income weighted by its initial foreign share. These are our basic components. However, in implementing this decomposition it is necessary to calculate companies' foreign share, which is impossible if worldwide income is negative. Therefore, companies with worldwide losses, either initially in 1996 or in 2004, are considered separately before proceeding with the full analysis based on the firm level data.[15]

## B. Estimating the Components

### *1. Effect of Excluding Companies with Worldwide Losses*

Implementing the above decomposition requires that worldwide income be greater than zero so that the share can be calculated. When companies with worldwide losses in either 1996 or 2004 are excluded from the sample, the growth in the aggregate foreign share of income falls from 14.0 percentage points to 11.3 percentage points. This 2.7 percentage point decline could have two basic sources. One is that some companies' domestic income declined so much from 1996 to 2004 that they resulted in a worldwide loss in 2004. Another is that companies with foreign losses large enough to cause a worldwide loss in 1996 had foreign income large enough in 2004 to eliminate the worldwide loss. But in regressions and probits to explain the occurrence of these patterns, the change in effective foreign tax rates did not seem to have any significance.

It is true that domestic losses seemed to become more important in 2004. Tabulations of the linked sample show domestic losses increased from 2.1 percent of worldwide income in 1996 to 5.8 percent of worldwide income in 2004. In contrast, there was only a modest increase in the significance of foreign losses, from 0.5 percent of worldwide income to 1.2 percent.

### *2. The First Component: Companies' Worldwide Income Growth Weighted by Their Initial Foreign Share of Income*

The first basic component is the increase in the aggregate foreign income share attributable to the growth of each company's worldwide profits from 1996–2004, holding its initial foreign share of income constant at its 1996 level, which is the second term

[15] In the application below, the estimates use finite changes in shares and worldwide growth. There is therefore an interaction term that has to be assigned to one of the components. Since the component composed of company worldwide growth weighted by the initial share is calculated first, the interaction term is implicitly assigned to the second component.

in the decomposition equation above. This component provides the answer to a simple question: What would have happened to the aggregate share of foreign income if each company had maintained the same foreign share of worldwide income in 2004 as in 1996 but experienced its own actual change in worldwide income? The answer is that the foreign share of overall worldwide income in the sample would have increased by 5.0 percentage points, or about 44 percent of the actual 11.3 percentage point growth in the sample in which companies with worldwide losses in either 1996 or 2004 were excluded. The companies that already had a large foreign share in 1996 grew much faster.

The first set of regression results presented in Table 6 illustrates the strong positive relationship between worldwide profit growth from 1996 to 2004 and the initial 1996 foreign share of income. The dependent variable is worldwide income growth, the ratio

**Table 6**

Worldwide Income Growth and the Foreign Share in 1996

| | Dependent Variable | | |
|---|---|---|---|
| Independent Variables | Growth of Income 1996–2004 (1) | Growth of Income 1996–2004 (2) | Growth of Income 1996–2004 (3) |
| Foreign share of income 1996 | 1.35*** | 1.35*** | 1.34*** |
| | (0.182) | (0.183) | (0.183) |
| R&D/sales 2004 | 8.41 | 8.55 | 8.06 |
| | (5.80) | (5.81) | (5.85) |
| Advertising/sales 2004 | –0.680 | –0.673 | –0.584 |
| | (2.13) | (2.13) | (2.13) |
| Incorporation after 1980 | 0.274 | 0.267 | 0.271 |
| | (0.175) | (0.176) | (0.176) |
| Size: log of worldwide sales 1996 | –0.084 | –0.086 | –0.088 |
| | (0.065) | (0.065) | (0.066) |
| Average effective foreign tax rate 1996 | | –0.318 | –0.748 |
| | | (0.594) | (0.820) |
| Change in average foreign tax rate 1996–2004 | | | 0.491 |
| | | | (0.644) |

Notes: Robust standard errors are in parentheses. The number of observations is $N = 415$. The growth in income is the ratio of worldwide income in 2004 to worldwide income in 1996. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

of worldwide income in 2004 to worldwide income in 1996. To examine the relationship between worldwide profit growth and the 1996 foreign share, we add the same variables used in the earlier regressions to control for other possible determinants of the firm's growth, its R&D and advertising intensity, the dummy variable for companies incorporated after 1980, and a size variable in the form of the log of worldwide sales in 1996.

The only statistically significant independent variable in the first regression is the foreign share of worldwide income in 1996, which is significant at the 1 percent level. The R&D and post-1980 incorporation variables have the expected signs but only approach borderline significance.

While the firm level results suggest that tax differentials already had a significant impact on foreign and domestic profit margins by 1996, the impact of the initial 1996 tax differential only explains about 1 percentage point of the *increase* in the foreign share from 1996 to 2004. That estimate is based on using the estimated coefficient in the first regression presented in Table 1 to adjust each company's foreign income share in 1996 for the effect of its foreign effective tax rate compared to the U.S. effective tax rate, and then examining how this foreign share, which is undistorted by taxes, alters the impact of its worldwide growth on its overall foreign income share in 2004.

As indicated in the decomposition (1), this component is the product of the company's initial foreign share and its actual worldwide profit growth from 1996 to 2004. Therefore, one question in assessing the role of taxes in this component is whether low foreign tax burdens enabled companies to achieve faster worldwide growth. The last two regressions presented in Table 6 attempt to answer that question. The dependent variable is again worldwide income growth as in the first regression, but the 1996 average foreign tax rate is added as an explanatory variable in regression 2 and the change in the foreign tax rate from 1996–2004 is added in regression 3. In neither case are the tax coefficients statistically significant, even at the 10 percent level. Lower effective foreign tax rates do not seem to be important contributors to worldwide growth. The importance of low tax burdens on foreign income for U.S. worldwide "competitiveness" does not seem to have much empirical support.

### *3. The Second Component: The Change of Companies' Foreign Share of Income Weighted by Its Initial Share of Worldwide Income*

The remaining 6.3 percentage points of the 11.3 percentage points increase in the aggregate foreign income share rise is attributable to the second component, the change in companies' foreign share weighted by their share of worldwide income. The approximate 5 percentage point decline in foreign effective tax rates between 1996 and 2004 widened the foreign-domestic tax differential to 15 percentage points (Appendix B, Table B1). Therefore, in view of the above discussion of the range of possible effects of the initial 10 percentage point tax differential on the share of foreign income, it appears that the 5 percentage point decline in the average effective foreign tax rate added from 1.25 percentage points to 4.5 percentage points to the foreign share of worldwide income.

Our preferred specification, where the impact of tax differentials can change over time, suggests the increase is 3.5 percentage points.

Finally, no contribution of tax rates is attributed to the other term in this component, the share of worldwide income weights, because the results in Table 6 indicate that low effective foreign tax rates do not contribute to worldwide growth.

#### *4. Adding Up the Components*

Using our preferred specification where the response to tax differentials can change over time, we conclude that the combined effect of the initial 10 percentage point tax differential and its 5 percentage point increase from 1996 to 2004 increased the foreign share of worldwide MNC income by about 12 percentage points. This 12 percentage point estimate is the sum of 7 percentage points attributable to the initial 10 percentage point tax differential, the 3.5 percentage points attributable to the additional 5 percentage point increase in the tax differential, and the 1 percentage point estimated for the first component in the decomposition. The complete range of estimates based on the various specifications and samples is 5 to 15 percentage points.

## VI. THE SOURCES OF FALLING EFFECTIVE FOREIGN TAX RATES — THE ROLE OF NEW U.S. RULES

Table 7 goes on to evaluate the sources of the decline in effective foreign tax rates, in particular the new tax planning opportunities provided by the changes in the U.S. tax rules after 1996. Two of the new U.S. tax rules introduced after 1996 are especially significant. The first is the implementation of the "check-the-box" rules in 1997. Prior to 1997, a payment of interest or royalties by one CFC to another would trigger a current U.S. tax liability. With the check-the-box rules, the MNC could declare one of the CFCs to effectively be an unincorporated branch of the other. But the host government still regarded this CFC as a corporation and would therefore permit a deduction for the payment. The payment would however not be subject to current U.S. tax, because from the U.S. Treasury's point of view the transfer of funds would occur within one consolidated entity. By using such "hybrid" entities, which are treated as corporations by the host country but as branches by the United States, MNCs are able to shift income from high tax to low tax countries, significantly lowering their overall foreign tax burdens, without incurring current U.S. tax liability.

A recent report by the Joint Committee on Taxation of the U.S. Congress describes the various structures that companies use in exploiting these new rules (Joint Committee on Taxation, 2010). One way to shift income from high tax countries to low tax countries is to use intercompany loans issued by a tax haven finance subsidiary to a hybrid entity that is an affiliate in a high tax country. Another device is to use R&D cost sharing agreements to locate patents in a tax haven subsidiary. The tax haven entity "shares" in the costs of an R&D development project and is thus entitled to a share of any royalties from the resulting innovation. The tax haven subsidiary then licenses the

**Table 7**

Sources of Change in Effective Foreign Tax Rates 1996–2004

| | Dependent Variables | | |
|---|---|---|---|
| Independent Variables | Change in Foreign Effective Tax Rate (1) | Use of Hybrids (2) | Change in Foreign Effective Tax Rate (3) |
| Use of hybrid entities | –0.0426** | | 0.0573* |
| | (0.0198) | | (0.033) |
| Parent R&D/sales 2004 | –0.696** | 4.54*** | 0.059 |
| | (0.341) | (1.11) | (0.386) |
| Parent advertising/sales 2004 | 0.272 | –0.295 | 0.308* |
| | (0.183) | (0.407) | (0.179) |
| Incorporation after 1980 | 0.0096 | 0.0324 | 0.0130 |
| | (0.0135) | (0.0337) | (0.0133) |
| Foreign profit margin 1996 | –0.101** | | –0.106** |
| | (0.050) | | (0.050) |
| Financial services dummy | –0.0324 | 0.0150 | –0.038* |
| | (0.0218) | (0.0553) | (0.020) |
| Foreign effective tax rate 1996 | –0.881*** | –0.0679 | –0.812*** |
| | (0.0456) | (0.1135) | (0.057) |
| Foreign share of income 1996 | | 0.103*** | |
| | | (0.035) | |
| Size: log of sales 1996 | 0.0006 | 0.0429*** | |
| | (0.0054) | (0.0137) | |
| Hybrid * effective foreign tax rate 1996 | | | –0.264** |
| | | | (0.114) |
| Hybrid * R&D/Sales | | | –3.72*** |
| | | | (0.95) |

Notes: Robust standard errors are in parentheses. The number of observations is $N = 415$. The hybrid entity variable indicates the extent of the company's use of hybrid entities under the check-the-box rules introduced in 1997. Hybrid * Tax is the interaction of the hybrid variable with the average foreign tax rate in 1996. Hybrid * R&D is the interaction of the hybrid variable with company R&D intensity. The Financial Services dummy variable indicates whether the parent received financial services income from abroad in 1996. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

innovation to a hybrid entity in a high tax location in exchange for deductible royalty payments. The hybrid structure of the affiliate in the high tax country again makes it possible to avoid current U.S. tax on these inter-affiliate payments.[16] These schemes lower the companies' average foreign tax rates, irrespective of where their real operations were located, thereby encouraging greater shifting of income from the United States.

The second significant new tax rule enacted in 1997 is the extension of the deferral privilege to active financial income. The Tax Reform Act of 1986 repealed deferral for financial income on the grounds that it was impossible to distinguish passive from active financial income. Financial income was therefore taxed by the United States on a current basis as earned. The 1997 restoration of deferral for active financial business abroad was the beginning of a series of temporary extensions of the active finance exception. The provisions specified the requirements for financial income to be considered active.

Companies may differ in the extent to which they benefit from these new planning devices because their situations differ. For example, companies with large operations in high tax locations might have a greater incentive to use hybrid structures to shift income to tax havens. In contrast, mobile high tech companies may already enjoy low average foreign tax burdens so that the use of hybrid entities would provide smaller benefits. Therefore, in the analysis below, one of the explanatory variables for the *change* in average foreign tax rates after 1996 is the average foreign tax rate, because it would reflects the incentive for companies to exploit the new planning devices.[17] Furthermore, the check-the-box variable described in the next paragraph is measured with error, so the initial effective foreign tax rate may provide independent information. The incentive to lower foreign tax burdens would have been particularly strong if companies had a high initial foreign profit margin. Presumably the location of their real activities would have resulted in the high initial foreign tax rate. The introduction of the check-the-box regulations in 1997 implied that average foreign effective tax rates were no longer necessarily dependent on where companies' real operations were located.[18]

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[16] The use of check-the box to lower foreign tax burdens may have encouraged greater income shifting from the United States. But we should note that some of the new planning strategies can make foreign income "disappear." In this case, the entity is owned directly by the U.S. parent that extends it a loan. The entity is recognized as a corporation in the foreign jurisdiction but it is a disregarded entity from the U.S. point of view. Therefore any interest payments to the parent have no U.S. tax consequences because it is a payment within the consolidated domestic company. But if the foreign jurisdiction allows tax consolidation of related companies, the interest deduction abroad can be used to offset the income earned by other operating companies in the same country. This strategy could cause the increase in the share of foreign income to be understated.

[17] Note that this is distinct from the analysis of domestic and profit margins in 1996, for example, in which the level of the 1996 average foreign tax rate is an explanatory variable. In that case, having a lower average foreign tax rate is hypothesized to increase the incentive to shift income from the United States.

[18] The initial average foreign effective tax rate in the change in tax rate regressions also corrects for the simple noise in effective rates from year to year, as a transitory high rate in one year would be expected to be followed by a lower rate in the subsequent year.

The expected effect of parent R&D intensity on the use of the new planning opportunities is ambiguous. Because of the difficulty in valuing high tech patents and products, intangible assets derived from R&D are important vehicles for income shifting (Grubert, 2003). Therefore low R&D intensity companies without the ability to shift intangible income may have found check-the-box particularly useful. (This effect could of course be reflected in a high initial foreign tax rate.) On the other hand, the new check-the-box rules made it possible for R&D-intensive companies to enter into a favorable cost sharing agreement with a tax haven subsidiary that would then receive royalties from operating hybrid affiliates in high tax countries.

Two new independent variables attempt to evaluate the significance of check-the-box and the active finance exception. The first is a measure of the use of hybrid entities. Form 5471 asks whether the subsidiary owns an entity that was "disregarded" under the check-the-box rules. A parent level check-the-box variable was constructed by giving a CFC a score of one if it reports a hybrid entity and zero otherwise, and then weighting the responses by subsidiary income.

The second new variable attempts to measure the extent to which a company might have benefited from the active finance exception. The tax files report the amount of financial services income that the parent company received from abroad in 1996. (Before 2007 repatriated financial services income was put in a separate basket for the purposes of computing credits for foreign tax on the income.) This is used to construct a Financial Services dummy variable that takes a value of one if financial services income was positive.

The other independent variables in Table 7 are the same as used earlier, the R&D and advertising intensity of the parent, a dummy variable for incorporation since 1980, and the size variable which is the log of company sales in 1996. R&D may play a role through companies' incentives to use hybrid entities and cost sharing agreements to shift income from high tax countries. Mature, larger companies may be in a better position to take advantage of the new planning opportunities.

Note that in Table 7 we regress the *change* in the average foreign tax rate on the *level* of the profit margin in 1996 on the grounds that companies with high foreign profit margins in 1996 had a greater incentive to use the new income shifting opportunities like check-the-box. This contrasts with the regressions in Table 5 where the *level* of the 2004 profit margin is regressed on the 2004 average foreign tax rate, and the regressions in Tables 1 and 2 where the *changes* in the profit margins are regressed on the *changes* in the foreign tax rate.

In the first regression in Table 7, the change in the average foreign rate from 1996 to 2004 is the dependent variable. The use of hybrid entities variable, which reflects whether the company takes advantage of the check-the-box rules, is significant at the 5 percent level and negative. As expected, companies use hybrid entities to lower their effective foreign tax rates. Parent R&D intensity also has a negative coefficient that is also significant at the 5 percent level, consistent with the use of R&D cost sharing agreements and hybrid entities to lower foreign tax burdens. As expected, the initial

effective foreign tax rate is highly significant statistically, and the initial foreign profit margin is significant at the 5 percent level.

The second regression is for the check-the-box variable itself, that is, the extent to which a company uses hybrid entities. The explanatory variables are again the company's R&D and advertising intensity, the corporate age indicator, the financial services dummy, the foreign effective tax rate in 1996, as well as the company's size and its foreign share in 1996. R&D-intensive companies would be expected to use hybrid entities to strip royalties from high tax countries. Companies with a high initial foreign share and a high initial foreign tax rate would have a greater incentive to lower foreign taxes. Larger companies would be in a better position to incur the costs of new tax planning.

Note the difference in the causation sequences between the first and second regressions. In the first regression, the hypothesis is that the *change* in the effective foreign tax rate depends on the intensity of the use of hybrid entities among other variables. In the second regression, the hypothesis is that the use of hybrid entities depended on the *initial levels* of the foreign tax rate and the foreign share of income.

The R&D intensity of the parent is highly significant statistically at the 1 percent level. The foreign share of income in 1996, which reflects both the relative size of foreign operations and their profitability in 1996, is also highly statistically significant. Surprisingly, the foreign tax rate in 1996 is completely insignificant in explaining companies' use of check-the-box, as a high foreign tax rate might be expected to result in a greater use of hybrids. Finally, the size of the company in 1996 is statistically significant in increasing the use of check-the-box. Large companies were in a better position to take advantage of the new planning opportunities.

The results of the third regression presented in Table 7 again have the change in the effective foreign tax rate as the dependent variable as in the first regression, but add two independent variables, the interaction of the 1996 effective foreign tax rate with the hybrid entity variable, and the interaction of the parent's R&D intensity with the hybrid entity variable. Both coefficients are highly significant, one at the 5 percent level and the other at much more than the 1 percent level. Check-the-box had a significant effect, particularly in R&D-intensive companies and those with high initial foreign tax burdens. Even though companies in high tax countries did not make more intensive use of hybrid entities than those in low tax locations, the ones in high tax locations benefitted much more from their use.

The financial services dummy has a negative coefficient but in the first regression it fails to be significant even at the 10 percent level. In the last regression, with the interaction variables, it just misses being significant at the 5 percent level. These results suggest that the active finance exception may have had an effect in inducing companies to lower their foreign tax burdens.

The hybrid entity coefficient in the first regression, which is combined with the mean of the variable (0.255 from Table B1) to get the mean effect, suggests that hybrid entities "contributed" more than 1 percentage point of the approximate 5 percentage point decline in average effective foreign tax rates. Using instead the coefficients in the third

regression presented in Table 7, which include the interaction terms, the use of hybrid entities is estimated to have contributed more than 2 percentage points to the decline in effective tax rates. This range of estimates is roughly consistent with Altshuler and Grubert (2005), who estimate that U.S. companies used check-the-box to lower their foreign tax burden annually by approximately $7.0 billion by 2002. Similarly, the coefficient for the financial services variable, combined with the frequency of the dummy, suggests that the active finance exception may have contributed about 0.5 a percentage point of the decline.

## VII. QUALIFICATIONS AND CAVEATS

### A. Possible Endogeneity Issues

The relationship between foreign income shares and average effective foreign tax rates is not a "normal" type of relationship in which the tax rate is purely exogenous to the firm. The relationship reflects companies' own decisions, with more aggressive, more mobile firms having both a lower tax rate and a greater foreign share of income. For example, a more aggressive company will shift more domestic income to low tax countries, simultaneously changing both the average effective foreign tax rate and the foreign share. Nevertheless, we can use the observed relationship to project what would happen if the tax burden on foreign income were set at the U.S. rate. In that case, the aggressive, mobile firms would have no more incentive to move either sales or profits to low tax locations than less mobile and aggressive firms.

It is possible to argue that a company which for some reason has a high profit margin abroad has a greater incentive to lower its foreign tax rate, so the direction of causation goes from foreign margins to foreign tax rates. In fact, there is some evidence for this when, in Table 7, we relate the *change* in foreign effective tax rates to the *initial* foreign profit margin because of the special income shifting opportunities offered by new features of the U.S. system. Companies with greater initial foreign profits had a greater incentive to exploit the new planning opportunities in order to lower their foreign tax liabilities.

But the test of whether the causation from foreign shares to foreign tax rates is important in interpreting our results can be found in what happens to domestic profit margins. If higher initial foreign profits motivate a company to simply arrange a lower foreign tax rate, this should have no necessary implications for its domestic profit margins. In fact, the company might be expected to have high domestic profit margins as well because it is relatively profitable on a worldwide basis. Therefore, if a lower average foreign tax rate is associated with *both* a higher foreign profit margin and a lower domestic profit margin, which is what we find, it would suggest that income is being shifted out of the United States in response to the ability to achieve lower foreign tax burdens.[19]

[19] The shifting itself would not necessarily further lower average effective foreign tax rates. The income could just be shifted proportionately to the country in which the income contributed to the new lower average rate.

Similarly, a company that needed to be near foreign customers might choose the low tax locations in the neighborhood. For example, a company that wanted a European base might choose to locate in low tax Ireland. Again, what happens to domestic profit margins compared to sales indicates the importance of this possibility. As we have seen, the relationship between changing foreign share and changing effective foreign tax rates is mainly attributable to a shift in domestic and foreign profit margins, not a shift in the location of sales.

Furthermore, the results on the role of R&D based intellectual property confirm the relationship between effective foreign tax rates and income shifting. The presence of parent-developed intellectual property both enables companies to achieve lower effective foreign tax rates and in turn magnifies the impact of tax differentials because it is so difficult to value accurately.

Another endogeneity issue is raised by the inclusion of the worldwide profit margin as an independent variable in the profit margin regressions. A shock to the foreign profit margin, for example, is transmitted to the worldwide profit margin. The coefficient for the worldwide profit margin may therefore be biased. But the effective foreign tax rate is the principle variable of interest and the worldwide profit margin was included to avoid omitted variable bias in its coefficients. High tech companies tend to be very profitable on a worldwide basis and have lower effective tax rates. The specification embodies the relatively straightforward hypothesis that an MNC's foreign and domestic profit margins would be similar apart from tax considerations.

### B. Possible Biases in the Estimated Foreign Share

As indicated above, the measure of foreign income is "earnings and profits" (E&P), which is defined in the Internal Revenue Code and approximates book income. E&P is measured using specific asset class lives and straight line depreciation, and other adjustments that distinguish it from domestic or foreign taxable income. Domestic income is U.S. taxable income, which can be affected by changes in depreciation and other changes in the measure of taxable income. It is therefore necessary to address the possible bias introduced by the somewhat different measures we use for domestic and foreign income. The definition of E&P was unchanged in the period covered by this paper. The question is the importance of changes that affected the measurement of domestic taxable income after 1996.

The most important was "bonus depreciation," a temporary provision that was introduced in 2002 and expanded in 2004. Firms could take an additional first year depreciation deduction of 30 percent (50 percent after 2004) of the adjusted cost basis of certain assets. The basis for depreciation was reduced in later years to reflect the larger initial deduction. Altshuler et al. (2009) show that bonus depreciation had a substantial effect, reducing aggregate corporate taxable income by about 10 percent in 2004.[20]

[20] I am grateful to Matthew Knittel for providing me with the adjustments used in their paper.

However, bonus depreciation seems to have been less important in our linked sample of large MNCs for which intangible assets created by R&D and advertising are very significant. In fact, in this sample, depreciation declined from 5.18 percent of domestic sales in 1996 to 4.45 percent of sales in 2004. It also declined in relation to gross profits after cost of goods sold and in relation to EBITDA (earnings before interest, tax, depreciation, and amortization).[21]

Another possible source of bias in the use of taxable income as a measure of domestic income is the growing use of stock options as a component of corporate compensation. The gain on "nonqualified" options, which were the most important type of option issued during this period, is deductible from corporate income when exercised. Such options may simply be a substitute for wages but, at a minimum, the timing of deductions can be distorted. But the Altshuler et al. data indicate that the net effect of these deductions peaked in 2000 and was much smaller in absolute terms in 2004 than in 1997, the first year in their analysis. Stock options are very unlikely to create problems of understating 2004 taxable income, relative to income in 1996.

The American Jobs Creation Act of 2004 introduced the 9 percent deduction for the income derived from domestic production activities, but this provision was not effective until 2005. It was intended as a replacement of the Extra-Territorial Income (ETI) provisions that had replaced the Foreign Sales Corporation (FSC) rules in 2000. The change from FSC to ETI may have some effect on the 2004 to 1996 comparison because it moved the dividends received deduction into the category of "other deductions." Our measure of domestic taxable income is before deductions for dividends received. But this factor seems relatively minor. Total dividends received deductions in 1996 in our sample were only 1.5 percent of net domestic income in 1996 and only declined slightly to 1.25 percent of income in 2004.

Therefore, any adjustment for the asymmetry between the measures of foreign and domestic income seems unnecessary. Any reduction in domestic taxable income relative to book income would of course represent a reduction in effective domestic tax rates. The impact of domestic-foreign effective tax rate differentials would therefore be understated. In any case the U.S. statutory rate remained constant at 35 percent and that is the key factor creating incentives for income shifting, which turns out to be the most important consequence of tax differentials.

Finally, there may be some suspicion that changes in exchange rates, in particular the fall in the dollar, explain a part of the increase in the foreign share of income. But the trade-weighted indices published by the Federal Reserve Board of Governors indicate that, if anything, the opposite is true for the period between 1996 and 2004.[22] For

[21] Statistics of Income data indicate that aggregate corporate depreciation expense was essentially flat as a percentage of sales from 1996 to 2004 (Internal Revenue Service, Statistics of Income (1999) and (2007)). Depreciation expense in any year depends on industry mix and the pace of recent investment. The fact that total depreciation expense was flat as a percentage of sales in spite of bonus depreciation suggests that investment in tangible property was declining.

[22] http://www.federalreserve.gov/Releases/H10/Summary/default.htm.

example, the Broad Index for the nominal value of the dollar increased from 97.46 to 113.76 and the real value increased from 88.52 to 99.01.

### C. Other Caveats

There are several factors causing our estimated impact of average effective foreign tax rates to be biased downward. One is the likely error in the measure of average effective tax rates. As described above, it is based on the taxes paid by subsidiaries with positive foreign income. Even if there are no subsidiaries with losses, effective tax rates can vary substantially from year to year because of the timing of deductions and credits. Similarly, the measures of the use of hybrid entities and of the importance of an MNC's financial operations are necessarily crude and probably lead to underestimates of their roles in the decline in effective foreign tax rates.

There may also be some bias in the estimates because the tax returns of all of companies with foreign income in 2004 could not be linked with their tax returns in 1996. As indicated earlier, this leaves almost 20 percent of 2004 foreign income out of the analysis. One major reason for the failure to link returns is that the taxpayers are too small to be sampled with certainty in any year. The entire group of companies with foreign income had average domestic sales about one sixth of the average sales in the matched sample. Not surprisingly, the foreign income share of the companies not linked is smaller than the linked sample, by about 10 percentage points. But their R&D intensity, measured as the ratio of parent R&D to domestic sales, seems comparable, so their response to tax differentials may be similar to the linked group.

There may be other reasons why some companies could not be linked. Their identification numbers could have changed because of a reincorporation or merger. Some companies may have become multinationals between 1996 and 2004. On the other hand, some companies may have dropped out because they were acquired by foreign companies. Foreign and domestic tax considerations may have played a role in these changes.

In interpreting the estimate above of the amount of MNC income shifted abroad, it is necessary to consider the possibility that a major regime change such as current taxation of foreign income at the 35 percent rate could induce takeovers by foreign companies. The preferred estimate of 12 percent of worldwide MNC income shifted abroad assumes that the universe of U.S. MNCs remains the same.[23]

Finally, this paper only focuses on the sales and profits of U.S. based MNCs at home and abroad. It does not address income shifting by foreign-based MNCs with operations in the United States. The data include the operations of U.S.-based companies in Puerto Rico if they are organized as CFCs incorporated in Puerto Rico. By 2004, most of the U.S. companies in Puerto Rico that had taken advantage of the Possessions Credit, which ended in 2005, had either converted to CFC status or ceased operations

[23] Simple expatriation or "inversions" of U.S. companies without a change in ownership or business has been severely restricted by the American Jobs Creation Act enacted in 2004.

in Puerto Rico. The Puerto Rican operations are therefore included in the analysis of profit margins, etc., based on 2004 levels. However, the conversion from their previous status may contribute some bias to the data on changes between 1996 and 2004.[24]

## VIII. SUMMARY AND CONCLUSIONS

This paper examines recent changes in the foreign shares of worldwide income of U.S. MNCs, and arrives at the following conclusions.

1. Various specifications and samples consistently show that the differential between domestic and foreign effective tax rates has a significant effect on the share of MNC income abroad. This effect operates mainly through changes in foreign and domestic profit margins rather than changes in the location of sales. Companies with lower effective foreign tax rates have both higher foreign profit margins and lower domestic profit margins. This evidence of income shifting from the United States is supplemented by the finding that increased R&D performed in the United States magnifies the impact of U.S.-foreign tax differentials. The problems in pricing intellectual property thus create greater opportunities for income shifting.
2. The responsiveness to tax differentials of the locations of both income and sales has increased over time.
3. The estimates of the quantitative impact of tax differentials on the overall foreign share of MNC income vary depending on the sample and the specification. Therefore the estimates of the combined effect of the initial tax differential in 1996 and further increases from 1996 to 2004 cover a wide range, from about 5 percentage points of worldwide income to about 15 percentage points. The estimate based on the specification that introduces the possibility that the response to tax differentials has changed over time results in an estimated increase of about 12 percentage points.
4. The check the box rules enacted in 1997, which facilitated the shifting of income from high tax to low tax foreign countries, seem to have contributed about 1 to 2 percentage points of the approximate 5 percentage point decline in foreign effective tax rates.

This paper also examines the relationship between a company's effective foreign tax rate and its domestic and worldwide growth, and reached the following conclusions.

5. It is difficult to detect any significant effect of lower foreign tax rates on domestic sales. The positive effects implied by the "low tax burdens on foreign income are good for domestic investment" argument and the negative effects implied by the "export of jobs" argument seem to cancel.

[24] The Possessions companies receiving the credit were incorporated in the United States.

6. Lower tax burdens on foreign MNC income do not seem to increase companies' worldwide growth. The evidence for the "competitiveness" benefits of lower taxes on foreign income does not seem very strong.

Finally, the increase in the foreign share of the income earned by MNCs seems likely to continue to be an important issue. Data published by the BEA on foreign profits relative to total national profits, including both the profits of MNCs and purely domestic companies, suggest that the trend has continued and indeed may have accelerated after 2004. Using these data, Hodge (2011) shows that foreign profits were 26.3 percent of total national profits in 2004 and increased to 38.2 percent of total national profits in 2009.

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## APPENDIX A: FINANCIAL COMPANIES

Financial companies account for 12 percent of the foreign income in the sample in 2004. Their total foreign income increased from 16.78 percent of worldwide income in 1996 to 25.03 in 2004. Income deferred abroad increased from 9.94 percent of worldwide income in 1996 to 17.61 percent of worldwide income in 2004. While the financial companies as a whole are less globalized, at least in terms of the location of income, the increase in their income and deferrals abroad was similar to that of nonfinancial MNCs. In addition, their average foreign tax rate declined by about the same 5 percentage points.

However, the growth of domestic losses was not important in the case of financial companies, amounting to less than 1 percent of worldwide income in 2004. On the other hand, the financial companies that initially were the most globalized tended to grow the fastest. That seems to explain almost half of the increase in the foreign share of financial companies' worldwide income. Perhaps the companies that were already highly globalized were the ones that could most benefit from the new deferral opportunities offered by the active finance exception.

## APPENDIX B

**Table B1**

Descriptive Statistics

| | Sample Mean | Standard Deviation |
|---|---|---|
| Average effective foreign tax rate 1996 (%) | 21.26 | |
| Average effective foreign tax rate 2004 (%) | 15.86 | |
| Foreign share of income 1996 | 0.381 | |
| Foreign share of income 2004 | 0.494 | |
| Growth of worldwide profits 2004/1996 | 2.00 | 1.71 |
| R&D/sales 2004 | 0.0146 | 0.0183 |
| Advertising/sales 2004 | 0.0180 | 0.0335 |
| Foreign sales share 1996 | 0.268 | 0.207 |
| Foreign sales share 2004 | 0.321 | 0.217 |
| Use of hybrids | 0.255 | 0.319 |
| Financial services dummy variable | 0.104 | 0.305 |
| Size: log of worldwide sales, 1996 | 21.90 | 1.26 |
| Incorporation after 1980 | 0.301 | 0.459 |
| Domestic profit margin 1996 | 0.0775 | 0.0940 |
| Domestic profit margin 2004 | 0.0457 | 0.0908 |
| Foreign profit margin 1996 | 0.0579 | 0.1210 |
| Foreign profit margin 2004 | 0.1140 | 0.1614 |

Notes: Average effective foreign tax rates are the aggregate (i.e., weighted) tax rates based on the entire matched nonfinancial sample. The foreign shares of income are based on aggregates for the nonfinancial sample, which excludes companies with worldwide losses in either 1996 or 2004. That is the sample used in the Table 1 regressions. The remaining data are unweighted means and standard deviations for the same group of companies.

JUNE 7, 2012

# Mitigating Base Erosion a Necessity of International Tax Reform, Congressional Staffers Say

**by Michael Beller**

Summary by taxanalysts

Erosion of the tax base is a problem that must be addressed as part of an overhaul of the tax code, two congressional tax staffers said June 6.

Full Text Published by taxanalysts

Erosion of the tax base is a problem that must be addressed as part of an overhaul of the tax code, two congressional tax staffers said June 6.

The discussion draft by House Ways and Means Committee Chair Dave Camp, R-Mich., released in October 2011 and advocating a shift to a territorial system of international taxation includes three options to discourage intangibles migration: treating excess profits as subpart F income; a variation on the low effective tax rate test used in Japan; and a combination of the "carrot" of a patent box of 15 percent with the "stick" of the current subpart F inclusion of foreign intangible income for controlled foreign corporations based in jurisdictions with tax rates of less than 13.5 percent. Royalty income paid by CFCs to U.S.-based parents could be taxed at a rate as high as 15 percent. (For the discussion draft, see *Doc 2011-22576* or *2011 TNT 208-27*. For prior coverage, see *Doc 2011-22525* or *2011 TNT 208-1*.)

E. Ray Beeman, House Ways and Means Committee majority tax counsel, said reform must make compliance with the rules as easy as possible without encouraging tax avoidance.

"There's an element here where you look at corporate behavior, not just from a compliance standpoint, but what kind of behavior is the current tax system encouraging?" Beeman said, speaking on his own behalf at the Bloomberg BNA and Baker & McKenzie Transfer Pricing Conference in Washington. "There's a lot of pressure on companies to do certain things for tax purposes that completely pass muster for transfer pricing, but as policymakers you have to ask the question, 'Is that the right behavior that we should be encouraging?'"

Beeman said there is broad agreement on Capitol Hill that if "whatever the companies out there might be doing is completely fine under the rules," the rules may need to be changed.

In addition to Camp's discussion draft, Senate Finance Committee member Michael B. Enzi, R-Wyo., has introduced the United States Job Creation and International Tax Reform Act of 2012 (S. 2091), which would also shift the country to a territorial system. (For prior coverage, see *Doc 2012-2830* or *2012 TNT 29-7*. For S. 2091, see *Doc 2012-2804* or *2012 TNT 29-54*.)

If a territorial system is enacted, lawmakers must consider what opportunities for tax avoidance it creates, said Jeff VanderWolk, Senate Finance Committee majority tax counsel, also speaking on his own behalf.

"Tax avoidance is a natural thing. It's like gravity," VanderWolk said. "Whenever you tinker with the tax law, you have to think about what avenues of avoidance you may be opening or continuing." However, the danger of creating new vehicles for avoidance should not prevent Congress and the president from pursuing reform of the country's international tax system, which is currently "the worst of all worlds," VanderWolk said.

"We have a worldwide statutory tax imposition that's relatively high," VanderWolk said. "In the last 10 to 15 years we've tried to ameliorate that for U.S. multinationals with the CFC look-through and check-the-box rules, and it has become easier for groups with mobile assets to defer indefinitely a lot of profits in very-low-tax jurisdictions."

If the Republicans maintain control of the House and Camp remain chair of the Ways and Means Committee, the question would become which of the three options presented in his discussion draft would best manage base erosion. Rocco Femia of Miller & Chevalier said the proposals to tax low-tax, cross-border income and create a U.S. patent box with a 40 percent deduction for a corporation's foreign intangible income plus the CFC's foreign base company's intangible income seem the most efficacious.

"Both options step back from that historical trend and are efforts to address base erosion without causing this negative feedback loop encouraging companies in the way they operate that may be detrimental to the U.S. economy," Femia said.

Beeman said whatever system of international taxation emerges must place all industries on a level playing field.

"The current system affects companies so differently depending on what industry you're in," Beeman said. "One of our big objectives is to have the tax system have as little impact in encouraging or discouraging corporate behavior as possible. [We want to] treat everybody the same way whether you're making semiconductors or automobiles or anything else."

***Correction***

*This article has been edited to correct a misquotation of Jeffrey VanderWolk, Senate Finance Committee majority tax counsel. For a full correction, please see* Doc 2012-12537.

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Tax Analysts Information

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July 9, 2012 Patrick Driessen

# Revenue Estimating Context for Territorial Proposals

1. Present law revenues: U.S. residual tax rate on foreign source income generally found to be <5%,[1] or about $20B. This calculation does not account for the lack of expense suspension under present law, which would lower this $20B pickup and the respective U.S. residual tax rate. This latter cutback depends upon whether expense focus is interest or all 864 expenses.
2. What's going on in 2012: Continuing multi-year growth in deferred earnings. However, there are limits to deferral under present law if, for whatever reason, the cash is needed back in the United States. There are indications that huge stock of deferred earnings has created tension: there have been some repatriations of permanently reinvested earnings at high U.S. residual tax, some shareholder agitation about lack of access to the earnings/cash, and considerable interest either in repatriation tax holiday redux or adopting territorial system with reduced toll charge on the stock of deferred earnings at changeover from worldwide to territorial.
3. Estimating Territorial: Setting aside transitional treatment of the stock of deferred earnings, with territorial the fisc gains by reduction of cross crediting and any expense disallowance or haircut, while the fisc loses from exemption. Static estimate must be adjusted for behavior. [2]
4. What could be at stake with territorial: Even with the movement of intangible property offshore that has already occurred, there is still a lot of IP in the United States. To the extent that this IP is in the United States under present law for liquidity reasons (that is, why bother moving IP offshore under present law if the earnings are needed in the United States and thus roughly would face the same level of tax, combined U.S. and foreign, whether moved offshore or not), then MNCs would be tempted to move this IP offshore under territorial. A very rough but plausible measure of the potential maximum IP revenue in play, looking just at U.S. IP, is about $75B upper bound a year at 2012 levels, which is about 20% of U.S. corporate receipts – the likely early-year revenue loss from IP movement for even a generous territorial proposal will be much lower, but this stylized example is a good discussion starter.[3]

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[1] E.g., Treasury, 12/20/07, found 2% U.S. residual tax rate, used in White House Press Release of 5/4/09; for argument that this rate is misleading, see *Tax Notes* discussion with P. Merrill, 8/6/09, in article by R. Jackson.

[2] Stacking a territorial estimate after an assumed 25% corporate rate, with no indication of the path taken to get to 25%, causes territorial to look better revenue-wise. The behavioral component of the estimate is dominant, and the incentive under territorial to either ameliorate the loss of cross-crediting, or convert various forms of income (including income that is currently U.S.-sourced) into exempt dividends under territorial, is reduced (but of course not eliminated) if U.S. corporate rate is 25%. If the path to the 25% rate were specified, the analysis would be more complicated because it is effective rates that drive behavior, and base broadening or credit limitations that might raise revenue to achieve a 25% corporate rate could affect effective rates.

[3] This story is simplified because U.S.-based IP that serves foreign markets should be distinguished from U.S.-based IP that serves the U.S. market. For a very rough indication of magnitude, there is $100B of royalties (including licensing fees) paid by U.S.-based companies to other U.S.-based companies under present law. To account for the variety of ways that royalties are classified for tax purposes by firms (e.g., they show up in inventory and cost of goods sold, they show up in an amorphous and huge category labeled "other income"), double the $100B to $200B, and then double again to $400B to account for self-constructed assets which often don't generate a separately observable income flow. Reduce the $400B by, say, $100B to account for IP that can't be moved out of the United States for institutional reasons (e.g., IP under contract with the DoD), and one is left with $300B of IP income, or $105B in tax revenue at 35% (and $75B at 25%) in 2012 levels that could be in play under territorial. This number is consistent with some separate BEA non-tax-based data. Now it would take taxpayers time to shift this IP, for example, taxpayers might prefer to create IP offshore anew (Google 14.0) rather than run 482/367(d) gauntlet. Accounting for this timing issue and a lower effective rate under present law because of tax attribute usage, there could still be $250B to $500B in U.S. tax revenue at stake over a ten-year budget period (with much of it loaded at the end of the budget period) under territorial relative to present law. It is emphasized that this rough number is just based on looking at IP and not other potentially mobile things like service income.

# Fixing Double Nontaxation Under The Transfer Pricing Guidelines

By Michael C. Durst


Michael C. Durst

Michael C. Durst is a columnist for *Tax Notes*.

In this column, he notes recent comments by the head of the OECD's Centre for Tax Policy and Administration stating that international organizations should focus on eliminating from the international tax system not only double taxation, but also double nontaxation. Durst examines the technical and political challenges that the OECD and other international organizations will face in seeking to address the problem of double nontaxation. He identifies two kinds of double nontaxation that arise under today's transfer pricing rules: technical double nontaxation, which is caused by defects in the way the rules try to adjust for imprecision in the identification of comparables (for example, by using faulty statistical measures of arm's-length ranges); and double nontaxation, which is caused by the rules' toleration of income shifting through licenses and other risk-shifting contracts between commonly controlled companies. Durst suggests that the current political environment will likely permit progress toward eliminating technical double nontaxation but that elimination of double nontaxation from income shifting poses political challenges that will require substantial effort to overcome.

The author is grateful for comments on an earlier draft. The views expressed in this article are solely his own.

## Introduction

In a recent speech to a UN group, Pascal Saint-Amans, the newly appointed head of the OECD's Centre for Tax Policy and Administration, reportedly said that international organizations involved in transfer pricing policy should focus their efforts on eliminating not only double taxation, but also double nontaxation.[1] Double taxation occurs under transfer pricing rules when two countries claim overlapping rights to tax the combined income of a multinational group. For example, a given multinational group might manufacture a product in Country A and sell the product to customers in Country B. If the tax administrations of Country A and Country B both claim the right to tax 60 percent of the total income from the manufacture and sale, the multinational group can be seen as being taxed on 120 percent of its income. One can argue about the degree to which double taxation poses an economic threat to global trade and investment. Perhaps the problem of double taxation has been exaggerated to some extent, and the primary threat to international trade and investment comes not from double taxation but instead from vague and unpredictable international transfer pricing rules.[2] Nevertheless, there can be little doubt that concern about the perceived harmful effects of double taxation has strongly influenced the development of transfer pricing laws over the years.

Double nontaxation is the converse of double taxation. If, in the above example, Country A claims the right to tax 30 percent of the total income from the cross-border activity and Country B claims the right to tax 50 percent, the multinational group can be seen as receiving a tax exemption on 20 percent of its combined income. Just as with double taxation, one can question the seriousness of the economic harm that arises from double nontaxation, because from the standpoint of encouraging international trade and investment, it may not be undesirable to provide tax exemptions to multinational companies. Many would argue, however, that double nontaxation deprives governments of revenues that they are entitled to receive under their duly legislated tax laws. It can also be argued that the opportunity to benefit from double nontaxation

[1]Tamu N. Wright, "OECD Official Says International Tax Work Should Include Ending Double Non-Taxation," *Tax Mgmt. Transfer Pricing Rep.*, Mar. 22, 2012.

[2]*See* Michael C. Durst, "Untangling Double Taxation in Transfer Pricing Policymaking," *Tax Notes*, Mar. 26, 2012, p. 1689, *Doc 2012-4066*, or *2012 TNT 58-10*.

places multinational companies at an undue advantage over businesses that operate in nonintegrated form.

Saint-Amans delivered his recent comments to a gathering with a special interest in the tax administration challenges of developing countries. Many developing countries face especially acute needs to maintain and grow their tax bases, and it seems likely that by emphasizing the OECD's commitment to combat double nontaxation, Saint-Amans sought to affirm the OECD's commitment to meeting the especially urgent revenue requirements of developing countries.[3] Opinions can differ, but I think it's fair to say that in the past, discussions of international tax policy have tended to give more airtime to concerns about double taxation than to concerns about double nontaxation, and this imbalance may have been especially problematic from the standpoint of developing countries. Saint-Amans may have intended to signal that any imbalance of this kind should be redressed. If so, the message is a welcome one.

It will, however, require more than good intentions to remedy the problem of double nontaxation under today's transfer pricing rules. The double nontaxation arises from two primary sources:

1. technical deficiencies in the operation of current transfer pricing methods, particularly regarding the use of statistical techniques; and

2. substantive holes in the operation of the transfer pricing rules, which permit companies to shift income to low- and zero-tax countries without reference to the level, if any, of actual business activity conducted in those countries.

The following discussion illustrates the operation of these two sources of double nontaxation under current rules and describes both the technical and political challenges that must be met if transfer pricing rules are to effectively address the problem of double nontaxation.

### 'Technical' Double Nontaxation

Longstanding technical flaws in the transfer pricing rules produce a great deal of double nontaxation today. Much of the dysfunction arises from the misapplication of statistical techniques to the comparables data that both government enforcement officials and private practitioners must attempt to use, under today's transfer pricing rules, in evaluating the transfer pricing compliance of multinational companies.[4] In practice, it is rarely if ever possible to locate a single transaction or set of transactions between independent parties that is convincingly comparable to the transactions conducted between members of a commonly controlled group. Instead, data from transactions which are only approximately comparable to the related-party transactions being evaluated must be used. For example, a practitioner seeking to benchmark the arm's-length pricing of controlled distributors of imported automobiles might be required to use data from uncontrolled sales of, say, refrigerators or road-building equipment. Practitioners then must apply statistical techniques to the imperfect sample set to identify the ''arm's-length range of results'' against which compliance or noncompliance is to be measured.

In practice, in most instances, government and private practitioners are able to identify from available sources only a few data points — sometimes as few as four, and rarely more than 10 — from transactions that are even arguably comparable to the related-party transactions under analysis. Practitioners then must try to apply valid statistical techniques to that tiny sample. Practitioners around the world usually follow the practice, suggested by the U.S. transfer pricing regulations, of basing the permissible arm's-length range on the interquartile range of the sample data — that is, the range from the 25th through the 75th percentiles of results. However, attempting to apply any statistical measure, including the interquartile range, to a very small data set does not constitute sound statistical practice. In fact, the arm's-length ranges produced under the flawed methods used today almost always are far too wide to provide tax authorities information that is useful in enforcement.[5] The excessive width of what are supposed to be arm's-length ranges causes tax administrations around the world to leave a great deal of money sitting on the table when attempting to enforce transfer pricing rules. The result is a substantial amount of double nontaxation.

One might ask why the IRS, followed by other tax administrations around the world, permitted the development and then the retention of such a patently deficient means of measuring taxpayers' compliance with transfer pricing rules. I believe that initially, those drafting the U.S. transfer pricing

[3]For further description of the OECD's efforts along these lines, see Kevin A. Bell and Rick Mitchell, ''OECD Secretary-General Pledges Group to Simplifying Transfer Pricing Provisions,'' *Tax Mgmt. Transfer Pricing Rep.*, Mar. 27, 2012.

[4]*See* the discussion of this problem in Durst, ''Pragmatic Transfer Pricing for Developing Countries,'' *Tax Notes*, Jan. 9, 2012, p. 243, *Doc 2011-25096*, or *2012 TNT 5-11*.

[5]*See* Durst, ''Congress Should Examine Transfer Pricing Documentation,'' *Tax Notes*, Feb. 28, 2011, p. 1069, *Doc 2011-2652*, or *2011 TNT 39-19*.

regulations simply failed to foresee the width of the interquartile ranges that typically would be generated in actual practice. That failure was understandable. Before the issuance of the U.S. regulations, there was no available base of experience for using interquartile ranges for transfer pricing purposes, and it was not possible to anticipate the very small sizes of the sample sets that practitioners typically would be able to identify.

Once the excessive width of the ranges became apparent, however, I believe it was politically impossible for the United States to remedy the problem and devise more precise enforcement techniques. The political opposition originated, at least in part, from the governments of several OECD countries which believed, during the late 1980s and early 1990s, that the United States was attempting to implement an unduly strict regime of transfer pricing compliance. During that time, there was widespread belief in the United States that foreign-owned distributors of imported automobiles and other high-value products were reporting insufficient U.S. taxable income.[6] Non-U.S. governments generally disagreed with the U.S. assessment and feared that the use of efficient enforcement tools by the United States would lead to an international competition in transfer pricing enforcement, which would damage international trade. That fear translated to an aversion, on the part of many governments, to changes in transfer pricing rules that would permit more efficient, large-scale enforcement. Hence, well into the 1990s, changes to rules that would permit more ready enforcement could be expected to encounter serious international opposition.

Today, however, economic conditions in countries around the world, and in all stages of economic development, have added urgency to the need to generate reliable streams of government revenue. Moreover, neither the United States nor any other country generally is seen today as uniquely proactive in transfer pricing enforcement. Therefore, to the extent that double nontaxation now arises from technical defects in compliance and enforcement techniques, the political environment may be conducive to remedying the problems.

In its efforts to remedy technical double nontaxation, the OECD should avoid the mistakes to which first the United States, and then the OECD itself, fell prey in the 1990s. The OECD should rigorously stress-test proposed statistical methods and other technical components of the transfer pricing guidelines, under conditions similar to those likely to be encountered in day-to-day tax compliance and administration. The OECD should not retain in its guidelines approaches that will lead to results too indeterminate to be enforced. If by rigorously testing transfer pricing methods the OECD succeeds in eliminating much of the double nontaxation which now results from technical deficiencies in those methods, the OECD could help to alleviate substantially government revenue problems in many countries.

### Double Nontaxation Through Income Shifting

Technical defects in transfer pricing rules are not the only cause of serious double nontaxation under current practices. As of the late 1980s and early 1990s, many multinational companies based in the United States and some other countries had for decades succeeded in using written contracts between commonly owned companies — particularly license agreements — to assign income from intangible property to affiliates in low- and zero-tax countries.[7] Typically, the amount of income shifted is grossly disproportionate to the amount of observable business activity, if any, that the multinational groups actually perform in the low- or zero-tax countries.

The long reliance on income-shifting techniques made it imperative for multinational companies to ensure that new transfer pricing guidance, whether promulgated by the OECD, the United States, or other countries, leaves room for the argument that the arm's-length standard permits income shifting through the use of self-serving intragroup contracts. There is irony in that position: The shifting of taxable income to countries in which little or no business activity is conducted, through contracts between commonly controlled entities with identical economic interests, would seem to be precisely the kind of activity in which unrelated parties, acting at arm's length, cannot engage. Therefore, allowing multinational companies to engage in income shifting through the use of contracts made between affiliated companies undermines the principle of economic neutrality on which the arm's-length standard is supposed to rest.[8] Nevertheless,

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[6]The political debate surrounding transfer pricing reform in the late 1980s and early 1990s is analyzed in Reuven Avi-Yonah, "The Rise and Fall of Arm's Length," 15 *Va. Tax Rev.* 89 (1995); and Durst and Robert E. Culbertson, "Clearing Away the Sand: Retrospective Methods and Prospective Documentation in Transfer Pricing Today," 57 *Tax L. Rev.* 37, 48-64 (2003).

[7]Recently, Edward D. Kleinbard has provided an extensive and useful analysis of those income-shifting techniques, which he describes as resulting in the creation of "stateless income." *See* Kleinbard, "Stateless Income's Challenge to Tax Policy," *Tax Notes*, Sept. 5, 2011, p. 1021, *Doc 2011-14206*, or *2011 TNT 172-5*.

[8]Paragraph 1.8 of the OECD guidelines provides:

> There are several reasons why OECD member countries and other countries have adopted the arm's length principle. A major reason is that the arm's length principle provides broad parity of tax treatment for members of

**(Footnote continued on next page.)**

allowance of that income shifting was essential as a political matter if transfer pricing guidelines of any kind were to be adopted. Therefore, despite the logical anomaly, to many the term ''arm's length'' today entails an allowance of a particular kind of income tax avoidance that is available only to commonly controlled taxpayers.

Politically, the attachment of many multinational companies to income-shifting structures is probably at least as important today as it was during the late 1980s and early 1990s. Not only do income-shifting techniques involving the licensing of intangible property remain popular, but new techniques involving the use of contracts to shift business risks, and hence income, to low- and zero-tax countries have become common.[9] It seems clear that the political forces favoring the continued toleration of income-shifting techniques remain strong.

To eliminate the double nontaxation that arises from income shifting, transfer pricing rules will need to require that the amount of income subject to tax by a particular country reasonably reflect an arm's-length level of compensation for the business activities that taxpayers actually carry out within the country. This is, after all, precisely the way income would be divided between unrelated taxpayers transacting with one another at arm's length.

But despite its conceptual appeal under the arm's-length standard, tying transfer pricing methods to real business activity conducted in a country will continue to face daunting political resistance. The practice of income shifting is so entrenched in the United States and some other countries that to curtail the practice without other carefully drafted changes to the income tax rules would result in substantial effective tax increases for many companies, and these would be viewed widely as undesirable on economic grounds.[10] Therefore, the elimination of double nontaxation arising from income shifting probably will require much more than careful technical work; it will likely also require significant tax reform efforts in the United States and other countries so the resulting increase in many companies' effective tax rates can be mitigated.

One emerging factor that might promote progress in curtailing double nontaxation through income shifting is the greater participation of developing-country governments in transfer pricing policy debates. Because the multinational companies that avail themselves of income-shifting opportunities often are headquartered in OECD countries, the governments of non-OECD countries may be less susceptible to the political considerations that historically have induced the allowance of income shifting under the transfer pricing guidelines. These governments may see little reason to postpone the revision of transfer pricing rules to preclude tax avoidance and the resulting loss of government revenue through income shifting.

The OECD is engaged in a review of transfer pricing rules affecting income from intangibles, and that review is likely to expose the various political pressures that influence policymaking in this area.[11] Already, one non-OECD government has expressed special interest in the design of rules for intangibles.[12] It remains to be seen whether the changing political landscape, and particularly the greater prominence of developing-country governments in transfer pricing debates, will lead to more effective regulation of double nontaxation through income shifting than has proven feasible under international transfer pricing rules to date.

## Conclusion

The declaration by Saint-Amans that transfer pricing policymaking should target double nontaxation as well as double taxation should be welcomed by many around the world, including the governments of developing countries facing severe fiscal challenges. To the extent that double taxation arises today as a result of technical defects in prevailing transfer pricing methods, the political environment should allow scope for considerable progress in the efforts that Saint-Amans is encouraging. Success in alleviating the technical component of double nontaxation would itself represent a

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[multinational enterprise] groups and independent enterprises. Because the arm's length principle puts associated and independent enterprises on a more equal footing for tax purposes, it avoids the creation of tax advantages or disadvantages that would otherwise distort the relative competitive positions of either type of entity. In so removing these tax considerations from economic decisions, the arm's length principle promotes the growth of international trade and investment.

[9]These techniques often are described using the rubric ''restructurings.'' In 2010 the OECD added a new Chapter IX to its transfer pricing guidelines seeking to address the question of restructurings. The new chapter expresses reservations concerning the use of those techniques, but despite their apparent inconsistency with the principle of neutrality stated in the guidelines, the new chapter does not declare that the techniques inherently violate the arm's-length standard.

[10]*See* Durst, ''Tax Reform in Exile,'' *Tax Notes*, Nov. 28, 2011, p. 1145, *Doc 2011-22410*, or *2011 TNT 228-5*.

[11]*See* Lee A. Sheppard, ''About That OECD Intangibles Project . . .'' *Tax Notes*, Apr. 9, 2012, p. 142, *Doc 2012-6868*, or *2012 TNT 63-7*.

[12]*See* ''Indian Official Urges U.N. to Create Intangibles Guidance for Developing Nations,'' *Tax Mgmt. Transfer Pricing Rep.*, Mar. 22, 2012.

considerable advance in international tax administration, which could lead to important financial benefits for many countries.

It will likely be more difficult to eliminate the double nontaxation that arises not from technical defects in transfer pricing rules, but instead from the contractual shifting of income to companies in low- and zero-tax jurisdictions. The reduction or elimination of that type of double nontaxation continues to face substantial political barriers, especially within OECD countries. The recently raised profile of developing countries in transfer pricing debates, however, adds a new factor that may lead to greater change in this area than has proven politically possible in the past. Today's perceived crisis in public finance — in countries of all stages of economic development — also may affect governments' attitudes toward double nontaxation through income-shifting techniques. Future debates over reform of transfer pricing rules, particularly as they relate to the taxation of income from intangible property, should be watched closely to see whether changing political and economic circumstances might alter the balance of transfer pricing policymaking as it relates to the control of double nontaxation.

SPECIAL REPORT
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# Stateless Income's Challenge to Tax Policy, Part 2

**By Edward D. Kleinbard**


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This report considers the tax policy implications of the phenomenon of stateless income. Stateless income is income that is derived for tax purposes by a multinational group from business activities in a country other than the domicile of the group's ultimate parent company but that is subject to tax only in a jurisdiction that is neither the source of the production factors through which it was derived nor the domicile of the group's parent company. Google Inc.'s "Double Irish Dutch Sandwich" structure is one familiar example.

Part 1 of this report, available at *Tax Notes*, Sept. 5, 2011, p. 1021, *Doc 2011-14206, 2011 TNT 172-5*, showed that the U.S. tax rules governing income from foreign direct investments often are misapprehended: In practice they do not operate as a worldwide system of taxation, but as an ersatz variant on territorial systems, with hidden benefits and costs when compared with standard territorial regimes. That claim holds whether one analyzes these rules as a cash tax matter or through the lens of financial accounting standards. Part 1 of this report rejected as inconsistent with the data any suggestion that current U.S. law renders U.S. multinational firms less competitive when compared with their territorial-based competitors.

Stateless income privileges multinational corporations over domestic ones by offering the former the prospect of capturing "tax rents" — low-risk inframarginal returns derived by moving income from high-tax foreign countries to low-tax ones. Other important implications of stateless income include reduced coherence in the concept of geographic source; the systematic bias toward offshore rather than domestic investment; the more surprising bias in favor of *investment* in high-tax foreign countries to provide the feedstock for the generation of low-tax foreign *income* in other countries; erosion of the U.S. domestic tax base through debt-financed tax arbitrage; many instances of deadweight loss; and, essentially uniquely to the United States, the exacerbation of the lockout phenomenon, under which the price that U.S. corporations pay to enjoy the benefits of dramatically low foreign tax rates is the accumulation of extraordinary amounts of earnings ($1.4 trillion or more, by the most recent estimates) and cash outside the United States.

Part 2 of this report picks up at this point. It is adapted and condensed from Edward D. Kleinbard, "The Lessons of Stateless Income," 65 *Tax L. Rev.* 99 (2011).

Part 2 demonstrates that policy conclusions that are useful in a world without stateless income do not follow once its presence is considered. The report identifies and develops the significance of implicit taxation as an underappreciated assumption in the capital ownership neutrality model that has been advanced as an argument for why the United States should adopt a territorial tax system, and it shows how stateless income tax planning undermines this critical assumption.

The report concludes that policymakers face a Hobson's choice between the highly implausible (a territorial tax system with teeth) and the manifestly imperfect (worldwide tax consolidation). Because the former is so unrealistic, while the latter's imperfections can be reduced through the choice of tax rate, the report ultimately recommends a worldwide tax consolidation solution.



**Table of Contents**

## V. A World Imbued With Stateless Income

### A. Overview

If stateless income tax planning were expunged, designing tax policy for foreign direct investment would become embarrassingly easy: Every country would adopt a territorial tax system and thus satisfy every known articulation of worldwide efficiency norms. The simple reason is that after-tax returns from marginal real investments would be the same around the world. In other words, every business would suffer the same tax burden when *implicit* as well as explicit taxes were considered. In this tax ecosystem, it would make no sense to add another layer of residence country tax. That would only drive down after-tax returns on investments for affected cross-border investors to levels below what they could obtain at home.

But stateless income fundamentally erodes this expectation. The whole point of stateless income tax planning is that it enables savvy multinational firms to capture tax rents by deflecting high-tax source country pretax returns to very low-tax jurisdictions and effectively doing the same with residence country pretax returns through interest expense arbitrage. Multinational firms can thereby capture a rate of return much higher than world after-tax norms, without incremental risk, as a result of planning opportunities available only to a few potential investors.

This section analyzes the problems that stateless income poses for standard efficiency benchmarks. It demonstrates that conclusions that are logical in a world without stateless income do not follow once the presence of stateless income tax planning is considered. The capital ownership neutrality standard has much to recommend it in theory. But it contains an underappreciated assumption that source country taxation is fully capitalized into the prices of firms operating in that source country. Phrased alternatively, the capital ownership neutrality model assumes that multinational firms face a constant after-tax rate of return everywhere in the world and suffer the same tax burden everywhere, when ''tax'' for this purpose is defined to include both explicit and implicit taxes. This report argues that stateless income tax planning vitiates the plausibility of this critical assumption.

Without the full capitalization of source country taxes in firm valuations, recommendations that the United States adopt a territorial tax system reduce to pleas for a ''competitive'' international tax framework. But those pleas are little different in practice from a call for trade export subsidies or the like and strangely ignore the competitiveness of domestic operations.

### B. Capital Ownership Neutrality

Consider the tax policies of plucky Freedonia and its neighbors. Freedonia imposes a 10 percent tax rate on domestic income. Sylvania taxes its multinational enterprises on a territorial basis, so that income earned outside it is taxed only by the source country. The Sylvanian tax rate on domestic income is 25 percent. Finally, Snowdonia has a territorial tax system like Sylvania's but a domestic rate of 35 percent. In this restricted world, all firms face only source country taxes, including on domestic income, which is simply income sourced to the country where the firm is resident. For simplicity, assume that all taxes on firm income are imposed at the firm level, so that there are no shareholder taxes or withholding taxes on distributions to foreign owners to take into account.

Further assume that there is no such phenomenon as stateless income; net income from business operations is taxed only to the firm earning it and only in the source country — that is, where the factors of production that generate the income actually are located. Moreover, the identity of the source country is clear, which in practice today would exclude many cases involving returns to intangible assets or the location of pure business opportunities. Finally, capital is globally mobile, and capital markets are efficient.

Under those assumptions, all firms earn the same after-tax normal returns on their investments around the world, because that is the equilibrium price. If after-tax rates of return are higher in Freedonia than in Snowdonia, investment will leave the latter and flow to the former until equilibrium is achieved.[86] Assume that this global after-tax rate is

[86]This is a standard assumption in economics presentations. *See, e.g.*, Rosanne Altshuler, ''Recent Developments in the Debate on Deferral,'' *Tax Notes Int'l*, Apr. 3, 2000, p. 1579; Michael

**(Footnote continued on next page.)**

5 percent. As previously pointed out, this implies that pretax normal corporate returns will vary from country to country to reflect differences in statutory tax burdens. Pretax corporate returns in Snowdonia will be 7.7 percent, while in Sylvania they will be 6.67 percent, and in Freedonia 5.56 percent.

A Freedonian domestic company that is a worldwide leader in basket-weaving designs and technology (Beweave Co.) earns $556 in taxable income and clears $500 after tax. That implies a market valuation of $10,000 for Beweave ($10,000 x 5 percent = $500). Two multinational enterprises, one domiciled in Sylvania and the other in Snowdonia, each eager to expand its global presence in the basket-weaving sector, prepare bids to acquire Beweave from the Freedonian family that controls it. How will taxes influence the outcome? They won't, at least directly. The Sylvanian and Snowdonian firms face different tax rates on their domestic operations, but not for foreign direct investment in Freedonia, because under each jurisdiction's territorial system the Freedonian net income tax is a final tax on Freedonian-source income.

Now introduce the United States into the mix. It taxes U.S. resident firms on their worldwide income (including income earned by foreign subsidiaries) and imposes a 35 percent tax rate. How would a potential U.S. acquirer fare in the bidding, assuming again that all firms are price takers in the auction (that is, they cannot individually determine the winning bid)? By virtue of the hypothesized genuine worldwide tax environment, U.S. firms face the same tax rate everywhere in the world (ignoring the possibility of excess FTCs) but do not have the same after-tax rate of return on investment as do their competitors in Sylvania and Snowdonia, because pretax rates of returns vary around the world. The result is that a U.S. firm cannot be competitive in bidding for an enterprise in a low-tax jurisdiction like Freedonia.[87] Ultimately, differences in the international tax systems used by Sylvania and the United States would lead to Beweave not being acquired by the company that could make the most productive use of it.

This is the dilemma envisioned by Mihir Desai and James Hines in their important article, "Evaluating International Tax Reform,"[88] and subsequent articles.[89] Desai and Hines argue that global welfare would suffer in this example if the United States

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Devereux, "Taxation of Outbound Investment," 24 *Oxford Rev. Econ. Pol'y* 698 (2008) at 702; Zodrow, Part 1, *supra* note 6, at 881.

The standard view implicitly rests on the idea that multinational firms actually reside in territorial tax jurisdictions. This assumption in turn largely comports with reality because (1) in the world today there is no significant example of a true worldwide foreign direct investment income tax system (in which active business income of a foreign subsidiary is taxed immediately to the parent company); (2) portfolio investments in corporate firms (whether domestic or cross-border) are not taxed on a passthrough basis (and therefore the income of those firms is taxed only on a source basis); and (3) direct investments by individuals in domestic firms also generally are not taxed on a passthrough basis. In theory, withholding taxes also might be taken into account, but in practice, they often are eliminated or greatly reduced by treaties or tax planning (*e.g.*, the use of equity derivative contracts), and in any event are source rather than residence country burdens. As such, they simply add to the effective tax rate imposed by the source country.

If one were to imagine a world in which net business income was taxed in all events immediately to ultimate individual owners, whether domestic or foreign, one would expect *pretax* returns to be equated around the world (and the world's economies to operate in an environment best described as approximating capital export neutrality). This essentially is the case today for interest income, because portfolio interest income generally is deductible in source countries, taxed in residence countries, and exempt from withholding tax in source countries. Since a portfolio investor resident in any given country faces the same tax rate on interest from any source, tax is irrelevant to the decision as to which debt instrument to acquire (although it is of course relevant to the fundamental decision to invest rather than to consume). Equilibrium prices therefore will correspond to pretax returns. Investors resident in different countries with different tax rates will have different after-tax returns, but each will capture the same after-tax return on otherwise identical debt instruments issued by issuers in different jurisdictions. Differences in tax rates will affect the propensity to invest and private after-tax wealth, but not prices.

[87]Imagine that both Sylvania Co. and US Co. want to acquire Beweave Co. Ignoring firm-specific synergies and the like, Sylvania Co. (or a competing domestic Freedonian firm) will be able to bid up to $10,000 for Beweave Co., because Sylvania Co. incurs no additional tax burden on its investment in Beweave as a consequence of the territorial tax system adopted by the Sylvanian legislature. US Co. cannot afford to bid that much. If it did, it would earn the same $556 before tax that Sylvania Co. would, but only $556 x 0.65, or $361, after tax, as a result of the imposition of U.S. corporate income tax on top of the Freedonian 10 percent. (The US Co. group would still bear $56 in Freedonian tax but would obtain a U.S. FTC for that cost, so that its total tax liability for the Freedonian investment would remain a constant 35 percent rate, or $195 — $56 paid to Freedonia and $139 to the United States.) That implies a valuation of the business of only $7,220 in the hands of US Co. Even if US Co. were uniquely able to raise Beweave's pretax returns by $200 a year, to $756, because of US Co.'s superior operational skills or better synergies with the target company, Sylvania Co. still would be able to outbid US Co. for the company.

[88]Mihir A. Desai and James R. Hines Jr., "Evaluating International Tax Reform," 56 *Nat'l Tax J.* 487 (2003). Under the Desai and Hines framework, the inability of US Co. to acquire Beweave is the measure of the potential economic inefficiency that arises from ownership distortions. Under the authors' theory, tax systems that ensure the identities of capital owners are unaffected by differences in residence country tax rates that permit the market to allocate ownership rights where they are most productive. *Id.* at 499.

[89]Subsequent articles include the following, cited in Part 1: Desai and Hines, "Old Rules and New Realities," *supra* note 66;

**(Footnote continued on next page.)**

were to use a worldwide tax system that was consistent with the capital export neutrality paradigm while other jurisdictions relied on territorial tax systems. A U.S. multinational firm's investment priorities would be unaffected by taxes, because it would face a constant (35 percent) burden wherever its proposed investments were located. But the Sylvanian multinational firm would be able to outbid the U.S. firm for a Freedonian domestic company, even when the target company would be more productive in the U.S. firm's hands, simply because the Sylvanian company would face only the (10 percent) Freedonian tax rate on the returns earned by that target company rather than its higher home country rates.

In response, Desai and Hines develop a new benchmark for measuring whether a country's tax policies governing foreign direct investment advance worldwide welfare, which standard they term "capital ownership neutrality."[90] In their article, Desai and Hines argue that the benchmark of capital ownership neutrality dominates the standard of capital export neutrality, which had previously been the consensus measure of worldwide efficiency in this area.[91]

Capital ownership neutrality in turn is seen as leading to a policy recommendation that the United States adopt a territorial tax system. The recommendations include not only the exclusion of foreign income from a U.S. multinational firm's tax base, but also the decision not to deny or otherwise limit deductions incurred by the U.S. parent company that might be thought to support the generation of that foreign income.[92]

These points can be summarized with a simple metaphor.[93] As a principle of tax policy design, the benchmark of capital export neutrality contemplates that when a U.S. multinational draws up its list of new investment opportunities both inside and outside the United States, that firm's priorities remain unchanged once tax consequences are considered. Desai and Hines extend the principle by requiring that when an auction is held for a firm (or, following Devereux, any asset) located, for example, in a low-tax country, the winner of that auction would be the same in a world with income taxes as it would have been in a world without them. Leaving the U.S. firm's shopping priorities unaffected would satisfy capital export neutrality but might not satisfy the test proposed by Desai and Hines. That is because even if the rank ordering of its preferences were unaffected by taxes, the U.S. firm might be unable to bid as much as another high-tax jurisdiction resident company that faces only host country taxes on third-country investments.

### C. An Implicit Tax Perspective

The goals contemplated by Desai and Hines could be implemented through a territorial tax system if the quotidian world even roughly corresponded to the conditions developed in the model laid out above: The geographic source of business income (that is, the country to which it appertains) is unambiguous, those returns are taxed only in the

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Desai, "New Foundations for Taxing Multinational Corporations," *Taxes* (Mar. 2004); Hines, "Foreign Income and Domestic Deductions," *supra* note 53; and Hines, "Reconsidering the Taxation of Foreign Income," *supra* note 50.

[90]Desai and Hines define capital ownership neutrality as the principle that worldwide welfare is maximized if the identities of the owners of capital are unaffected by tax rate differences. Desai and Hines, "Evaluating International Tax Reform," *supra* Part 1, note 76, at 488. The term appears to have been coined by British economist Michael Devereux in "Capital Export Neutrality, Capital Import Neutrality, Capital Ownership Neutrality, and All That," Institute for Fiscal Studies working paper (June 11, 1990).

[91]Capital export neutrality takes as its fundamental economic premise the goal of enhancing worldwide welfare by ensuring production efficiency, which is achieved when the reallocation of production factors from one country to another would not lead to greater output. Devereux, "Taxation of Outbound Direct Investment," *supra* note 86, at 701 ("CEN implies that (a) the international tax system will not distort the location decisions of any individual investor, (b) the pre-tax rate of return in all jurisdictions will be the same (production will be efficiently organized), but (c) investors in different jurisdictions may face different post-tax rates of return on their investment, and hence different incentives to save"). A state of global production efficiency implies that pretax normal returns are consistent throughout the global economy. *Id. See also* Altshuler, "Recent Developments in the Debate on Deferral," *supra* note 86.

Looking at the investment decisions of a U.S. multinational firm from this perspective, Peggy Musgrave, who developed much of the original analysis, concluded that production efficiency could be furthered by taxing all returns earned by a U.S. company, whether directly or through foreign subsidiaries, at the same (U.S.) rate. In that way, the U.S. parent company would make the same after-tax decisions on where to situate a

**(Footnote continued in next column.)**

new investment as it would make in the absence of taxes (subject, of course, to any wealth effect of the tax burden itself). Graetz, "Taxing International Income: Inadequate Principles, Outdated Concepts, and Unsatisfactory Policies," 54 *Tax L. Rev.* 261, 284-294, 285 (2001). Thus, capital export neutrality is usually advanced as the justification for tax systems that impose "worldwide" taxation on resident companies (however defined) and that pair that worldwide taxation with an FTC.

[92]On this last point, see Hines, "Reconsidering the Taxation of Foreign Income," *supra* Part 1, note 50; and Hines, "Foreign Income and Domestic Deductions," *supra* Part 1, note 53.

[93]*See also* Mitchell A. Kane, "Ownership Neutrality, Ownership Distortions, and International Tax Welfare Benchmarks," 26 *Va. Tax R.* 53, 59 (2006) (offering what he describes as a revised version of ownership neutrality, under which "ownership neutrality will hold where the potential acquirer with the greatest productivity advantage will be able to offer the highest bid for the target").

source country where they are earned, and after-tax corporate normal returns throughout the world are therefore the same. Desai and Hines appear to have relied on those assumptions in developing their policy recommendation that the United States adopt a territorial tax system.[94] The resulting problem is not with this logic, but with the fact that stateless income vitiates the existence of uniform market clearing prices for firms or for business investments.

In other words, the capital ownership neutrality model assumes a world of perfect ''tax capitalization'' — one where different tax burdens on different investments are reflected in prices, so that all instruments yield the same after-tax risk-adjusted returns. Tax capitalization also is described through the language of ''implicit taxation.''[95] For example, imagine that U.S. fully taxable normal returns are 10 percent, and a high-grade tax-exempt municipal bond yields 6.5 percent, so that both a $1,000 principal amount taxable bond with a 10 percent coupon and a $1,000 principal amount tax-exempt municipal bond with the same maturity and a 6.5 percent coupon trade for $1,000. In this case one can say that the different tax burdens have been capitalized into prices, or that the municipal bond's owner bears an implicit tax of 35 percent, because she accepts a 6.5 percent rather than 10 percent coupon.

Implicit taxes are not collected by a government, but they are reflected in an investor's yield. In this sense, the capital ownership neutrality model can be described as assuming that all businesses, wherever located in the world, earn the same after-tax normal rate of return and suffer the same tax burden, where ''tax'' for this purpose is understood to include both explicit and implicit taxes.

The capital ownership neutrality model assumes that from the perspective of a U.S. multinational firm, an investment in a foreign target company functions exactly like a municipal bond in the U.S. domestic market with perfect tax capitalization. Without this assumption, Desai and Hines cannot conclude that a territorial tax regime can satisfy capital ownership neutrality.

There is extensive domestic literature that explores the twin concepts of tax capitalization and implicit taxation. In particular, the existence in the capital markets of tax-exempt municipal bonds alongside otherwise comparable taxable ones offers a perfect opportunity to explore the practical aspects of tax capitalization theory.[96] Also, the capitalization of tax benefits into prices received much attention during the heyday of individual tax shelters. Some argued that the after-tax yields on tax shelter investments necessarily would fall to the same yields as otherwise comparable taxable investments, leaving the system (in the words of Boris Bittker) with inefficiencies (more office towers in Houston than might be the case in a world of constant burdens on capital investments) but no inequities (no taxpayers — or at most, only the very earliest movers — would capture inframarginal yields on their tax shelter investments).[97]

The literature reflects the consensus that tax capitalization does not function as perfectly as theory would predict.[98] For example, municipal bond yields are higher than would be expected in a

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[94]For example, in a recent article, Hines responds to criticism that his proposals would be unfair to U.S. domestic firms by arguing that it is fair that the United States not tax the income of a U.S. firm's foreign subsidiary that does business in a zero-tax jurisdiction, while fully taxing the U.S. parent's domestic income, because competition will drive down the after-tax yield in the first jurisdiction to the same level as that of wholly domestic U.S. companies. Hines, ''Reconsidering the Taxation of Foreign Income,'' *supra* Part 1, note 50, at 292-293 (''The zero tax rate in the foreign jurisdiction unleashes foreign competition that reduces the returns that investors can earn locally.'' *Id.* at 293).

[95]Myron S. Scholes et al., *Taxes and Business Strategy: A Planning Approach*, ch. 5 (2009); Stanley Koppelman, ''Tax Arbitrage and Interest Deduction,'' 61 *S. Cal. L. Rev*. 1143, 1172-1173 (1988).

[96]*See* Merle Erickson, Austan Goolsbee, and Edward Maydew, ''How Prevalent Is Tax Arbitrage? Evidence From the Market for Municipal Bonds,'' 56 *Nat'l Tax J*. 259 (2003). Erickson, Goolsebee, and Maydew find few firms engaging in municipal bond tax arbitrage and conclude that there must be significant (broadly defined) transaction costs associated with this type of arbitrage. *Id.* at 268.

[97]Bittker, ''Equity, Efficiency and Income Tax Theory: Do Misallocations Drive Out Inequities?'' 16 *San Diego L. Rev*. 735 (1979); Bittker, ''Tax Shelters and Tax Capitalization or Does the Early Bird Get a Free Lunch?'' 28 *Nat'l Tax J*. 416 (1975).

[98]David Weisbach, ''Implications of Implicit Taxes: Commentary on Crane's 'Some Explicit Thinking About Implicit Taxes,'' 52 *SMU L. Rev.* 373, 380 (1999) (''Reliance on full capitalization is utopian. Full capitalization has never happened and is unlikely to ever happen''); Calvin H. Johnson, ''Inefficiency Does Not Drive Out Inequity: Market Equilibrium & Tax Shelters,'' *Tax Notes*, Apr. 15, 1996, p. 377, *Doc 96-11398*, *96 TNT 78-28* (''Equilibrium between the returns from tax-favored investments and from debt has never happened and cannot be expected to happen. The supply of tax-favored investments is too large and too elastic. In absence of equilibrium, the interest deduction on debt-financed investments in tax-favored assets does not work right. In absence of equilibrium, debt-financed, high-bracket investors bid up the price of tax-favored investors and drive out all lower-bracket competitors. In absence of equilibrium, debt can become cost-free after tax: the tax savings generated by the debt is more valuable than the debt itself costs in real or present value terms''); Scholes et al., *supra* note 95, at 143-145, review economic literature finding evidence that tax capitalization occurs in general, but they also point out that in light of different clienteles, ''market frictions or tax-rule restrictions are required to prevent arbitrage opportunities.''

world of perfect capitalization.[99] Indeed, Hines recognizes in his most recent article that municipal bonds are an example of a tax capitalization market failure, which he attributes ''insufficient demand'' (for which one could also write ''oversupply'').[100] But Hines does not then consider the possibility that multinational groups can defeat the mechanism of tax capitalization themselves, through stateless income tax planning.

### D. Extending the Model for Stateless Income

One could develop strong arguments why it would be implausible to assume the existence of perfect tax capitalization in the returns on business investments across different countries. Critically, however, it is unnecessary to do so.

Tax capitalization cannot work in the international context to ensure that all firms face the same after-tax returns on foreign direct investment by virtue of the distinction between what Prof. Stanley Koppelman termed ''status'' tax arbitrage and ''asset'' tax arbitrage.[101] Municipal bonds are an example of asset arbitrage — the asset itself carries the special tax preference. In theory, it would be possible to describe circumstances (efficient markets, no limits on debt incurred for arbitrage activities, and a supply curve for tax-favored assets identical to that for otherwise comparable tax-unfavored ones) under which full tax capitalization would be achieved for those assets.

By contrast, status tax arbitrage is personal to the taxpayer, not a characteristic of the asset. The fully taxable bond that becomes tax exempt when held by a Roth IRA or a university endowment is an example. Tax capitalization cannot gain even a toehold when the after-tax return on the same asset varies from the pretax return (that is, a zero tax burden) to the maximum statutory marginal rate, depending on the taxpayer's status.

Even if asset tax arbitrage theory worked perfectly in practice, the problem that capital ownership neutrality model ignores is that multinational enterprises can engage in status arbitrage. A multinational firm's income from foreign direct investment is not invariably taxed in the source country in an economic sense. Instead, stateless income tax planning enables multinational firms to capture high-tax-country pretax yields on which those firms pay tax only at low rates in other countries.

To see this, return to the model described above and introduce the concept of stateless income. For simplicity, assume that a multinational firm (but not a local domestic one) can arbitrarily move income from high-tax jurisdictions (including the multinational's home country) to low-tax ones while retaining ownership of the income stream. (The simplest example would be interest paid within the multinational enterprise's group, from a high-tax subsidiary to a low-tax one.) Further assume that the United States has implemented a territorial tax system as the basis for taxing foreign direct investment by U.S. multinational firms. As a result, no U.S. tax is imposed on a foreign subsidiary's earnings.[102] Moreover, the United States has followed the Hines recommendation not to limit in any way the deductibility of U.S. domestic expenses, even when those expenses are directly incurred to finance foreign direct investments. How do these new assumptions change the capital ownership neutrality analysis, as summarized in the preceding subsection?

The analysis changes fundamentally, not for a prospective investment in a real business in Freedonia or any other low-tax jurisdiction, but for prospective investments in Sylvania or other *high-tax* countries. If one accepts the original model's assumption that after-tax (and before stateless income tax planning) rates of return are constant around the world, the injection of stateless income into the model means that a multinational enterprise, but not a wholly domestic firm, can capture the higher pretax normal returns found in high-tax countries, but pay low taxes on them, by shifting the locus of taxation of those high pretax returns to a low-tax jurisdiction — what this report terms tax rents.

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[99]Koppelman, *supra* note 95, at 1176-1185; Erickson, Goolsbee, and Maydew, *supra* note 96, at 267-268 (finding that there may be costs that raise the costs of borrowing for firms, thereby making arbitrage unprofitable); Johnson, ''Inefficiency Does Not Drive Out Inequity,'' *supra* note 98, at 381-386.

[100]Hines, ''Reconsidering the Taxation of Foreign Income,'' *supra* Part 1, note 50, at 293.

[101]Koppelman, *supra* note 95, at 1175-1176. Asset tax benefits attach to specific assets and are subject to market forces. Prices of these assets will rise relative to other assets to reflect the tax benefit. *Id.* Status tax benefits result from the status of the taxpayer or the status of the intermediary through which the taxpayer invests rather that the type of asset purchased (*e.g.*, bonds that yield nontaxable income because the taxpayer is exempt from tax). *Id.* Status tax benefits are not capitalized and can present opportunities for status tax arbitrage. Eugene Steurele used the terms ''normal'' and ''pure'' to make the same point. Eugene Steurle, *Taxes, Loans, and Inflation*, at 59-60, n.4 (1985).

[102]Technically, territorial tax systems also retain residence country taxation for some categories of passive or mobile income (termed subpart F income in the United States). The text assumes that the stateless income strategies used here would not trigger those rules.

In effect, as long as stateless income tax planning is available, investments in high-tax countries become opportunities to capture supernormal after-tax returns, but only for multinational firms that can exploit those planning opportunities. Only multinational enterprises can acquire stateless income, because to generate it requires affiliates in both low-tax and high-tax jurisdictions.

As an illustration, recall that in the original example normal pretax returns in Sylvania, with its 25 percent tax rate, are 6.67 percent (thus yielding 5 percent after tax), while normal pretax returns in Freedonia are 5.56 percent (also yielding a 5 percent after-tax return). Now inject stateless income tax planning into a U.S. multinational firm's corporate acquisition strategy.

If a U.S. multinational were to acquire a Sylvanian target company and divert some of the target's income to Freedonia, the U.S. firm would have an after-tax return of 6 percent on that diverted income, not the global after-tax normal return of 5 percent (6.67 percent pretax return minus a Freedonian 10 percent tax). Moreover, the U.S. firm could further turbocharge its returns by financing the deal with debt at the U.S. parent level. The net effect would be to convert 35 percent taxed domestic income into 10 percent taxed foreign income. And this opportunity would exist only through strategies available because of the U.S. firm's status as a multinational enterprise.

As this example illustrates, a U.S. (or foreign) multinational enterprise's shopping list for the global auctions that Desai and Hines envision will be fundamentally rearranged once the firm's stateless income planning opportunities are considered. Ironically, rearranging priorities will not directly affect the multinational firm's interest in enterprises in low-tax jurisdictions. Those target companies presumably already are priced to reflect the low-tax environment in which they operate. Tax capitalization should work in those cases.

The multinational enterprise's priorities that will change are its appetites for acquiring target companies in high-tax countries. They will become much more attractive to the multinational firm than to domestic bidders to the extent that under the tax law of the jurisdiction, stateless income planning strategies are easily implemented. And in turn, U.S. domestic leverage exacerbates the resulting policy problem (or business opportunity).

Stateless income tax planning thus also undermines Hines's arguments that the domestic U.S. expenses of a U.S. multinational firm should be fully deductible in the territorial tax system, regardless of whether those expenses directly support foreign income not subject to U.S. tax.[103] In a world where stateless income can be earned, the result would be a zeroing out of the firm's domestic tax base.[104]

In other words, permitting a deduction for U.S. expenses that are directly allocable to earning foreign income would be tantamount to offering U.S. individuals unlimited IRA accounts and full deductibility of interest expense on all borrowings. Rational individual taxpayers would borrow in their personal capacity and invest in low-risk assets through their IRAs. They would capture a positive arbitrage profit not because of a market failure in tax capitalization, but rather because of their status (the IRA), which enables them to hold otherwise taxable financial assets without paying tax.[105] The same would apply — indeed, to a large extent does apply today — to a U.S. multinational firm that can use its status to transmute high-tax jurisdiction pretax normal returns into low-taxed income.

In response, it might be argued that, although the existence of stateless income invalidates the tax capitalization story, if every other country has adopted a territorial tax system and broadly countenances the existence of stateless income tax planning, the United States should too in order to create a level playing field for U.S. multinational firms. This argument is not an economic welfare argument. It is in practice a simple call for corporate ''competitiveness'' and at most an incomplete national welfare argument, but one of uncertain merit. The urge to cheer for the home team is understandable, but the intuitive sports metaphor does not necessarily hold.

In effect this argument is indistinguishable from a call for export subsidies on the grounds that other countries offer them. If U.S. tax revenues are kept constant, those de facto subsidies must be borne by other Americans. The positive externalities to the United States of fielding a team of successful U.S.

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[103]Hines, ''Foreign Income and Domestic Deductions,'' *supra* Part 1, note 53, at 463-465. Hines argues that not allowing for these deductions distorts the behavior of U.S. multinational firms and encourages them to increase foreign rather than domestic investment.

[104]Kane, ''Considering 'Reconsidering the Taxation of Foreign Income,''' 62 *Tax L. Rev.* 299, 314 (2008) (''With arbitrage the concern is that the U.S. taxpayer could zero out tax liabilities on the income from the domestic deployment of capital'').

[105]*Compare* Scholes et al., *supra* note 95, at 155-156 (the elimination of tax liability through leverage-based tax arbitrage when the implicit tax burden is lower than explicit taxes saved).

multinationals (complementarily in U.S. job creation, for example) must be weighed against the costs of funding the subsidy and the social costs of distorted investment decisions.[106] This is an entirely different analysis from that undertaken in advancing capital ownership neutrality as a policy prescription for the United States.

## VI. Putting Teeth Into Territoriality

### A. Overview

Every country that is the residence of major multinational enterprises, other than the United States, has adopted some form of territorial tax system. But stateless income distorts the implicit tax mechanism that lies at the core of the most cogent theoretical case for territorial taxation, and it compounds the meaninglessness of the entire concept of the source of income. The economic case for territorial taxation therefore compels a correlative campaign to eradicate stateless income tax planning opportunities of every form.

This section considers how countries might respond to the phenomenon of stateless income within the context of territorial tax systems. Territorial tax systems and worldwide tax consolidation, of course, are polar opposite approaches from which to address the phenomenon of stateless income. From the unique perspective of U.S. law, however, both territorial tax systems and a worldwide tax consolidation regime share an immediate welfare-enhancing aspect, which is the elimination of the lockout effect. The huge amount of locked-out earnings (more than $1.4 trillion) and their accelerating growth argue strongly for a decisive move in either direction and away from the status quo.

### B. Cartoon Territoriality

In light of the debate over the future direction of U.S. corporate tax policies regarding foreign direct investment, it is important to begin the discussion of territorial tax responses to the stateless income phenomenon by clarifying the current state of the art in territorial tax design. Recent speeches,[107] testimony,[108] and articles[109] by representatives of U.S. multinational firms and their advisers paint consistent pictures of both the current U.S. tax system in operation and the current state of development of territorial tax systems.

In the standard version of this presentation, every major country that uses a territorial tax system does so with at most inconsequential restrictions (such as a blanket inclusion in taxable income of 5 percent of otherwise exempt dividends from foreign subsidiaries). Expenses incurred in the residence country are not allocated against tax-exempt (territorial) income or otherwise limited or disallowed (beyond the 5 percent sort of haircut referenced above). Further, those presentations imply that these systems are static in design and that there is no pressure to reform them to address the stateless income problems identified in this report.

This is incomplete and misleading, to the point where it fairly can be labeled a cartoon version of the territorial tax policies that should be adopted if the United States were to move in this direction. Foreign policymakers are highly concerned about the tax avoidance issues implicit in the stateless income phenomenon,[110] international tax design is a subject of political controversy in other countries,[111] non-U.S. analysts have recently focused closely on the problem,[112] and many natural experiments are underway in different countries to address these concerns.

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[106]To suggest that U.S. multinationals are primarily owned by U.S. persons (which is true) and therefore that higher U.S. multinational profits justify ''pro-competitive'' international tax policies looks at one side of the picture but overlooks that those higher profits are being funded through subsidies provided by other U.S. persons (for example, domestic businesses).

[107]Amy S. Elliott, ''GE Executive Criticizes Possible U.S. Territorial System,'' *Tax Notes*, Feb. 28, 2011, p. 998, *Doc 2011-3673*, *2011 TNT 35-5* (remarks of John M. Samuels, GE vice president and senior counsel for tax policy and planning).

[108]Testimony of Robert A. McDonald, chair, Fiscal Policy Initiative Business Roundtable, before the House Ways and Means Committee hearing on tax reform, Jan. 20, 2011 (Jan. 24, 2011), *Doc 2011-1279*, *2011 TNT 14-42* (testimony of president and CEO of Procter & Gamble).

[109]Philip R. West, ''Across the Great Divide: A Centrist Tax Reform Proposal,'' *Tax Notes*, Feb. 28, 2011, p. 1025, *Doc 2011-2086*, *2011 TNT 40-7*; Barbara Angus et al., ''The U.S. International Tax System at a Crossroads,'' *Tax Notes*, Apr. 5, 2010, p. 45, *Doc 2010-4430*, *2010 TNT 64-4*; John M. Samuels, ''American Tax Isolationism,'' *Tax Notes*, June 29, 2009, p. 1593, *Doc 2009-14174*, *2009 TNT 122-11*.

[110]Thomas Rixen and Markus Leibrecht, ''Double Tax Avoidance and Tax Competition for Mobile Capital,'' ch. 4 in Martin Zagler (ed.), *International Tax Coordination: An Interdisciplinary Perspective on Virtues and Pitfalls* 70-71 (2010) (identifying government responses to stateless income planning and further speculating that the breadth of these responses to date may have been limited by international tax competition among nations, at the behest of multinational firms).

[111]Kristen A. Parillo, ''Activists Protest Vodafone's Alleged 'Tax Dodge,'" *Tax Notes Int'l.*, Nov. 8, 2010, p. 392, *Doc 2010-23589* (reporting on activist groups' demonstrations against international tax planning activities of U.K. firm Vodafone).

[112]Wolfgang Schoen, ''International Tax Coordination for a Second-Best World,'' 1 *World Tax J.* 67 (2009) (Part I), 2 *World Tax J.* 65 (2010) (Part II), and 2 *World Tax J.* 227 (2010) (Part III) (casting taxation of foreign direct investment as an exercise in intersovereign coordination, urging an incremental continuity approach, and ultimately recommending allocation of taxing

**(Footnote continued on next page.)**

One final important overarching theme for U.S. policymakers is that the rationales that other countries use in adopting territorial systems extend beyond economic efficiency arguments. Within the EU, territorial tax systems are easier to implement than are worldwide tax consolidation regimes in a manner consistent with the tightly integrated nature of the European market and with European Court of Justice jurisprudence interpreting Treaty of European Union constitutional principles governing freedom of establishment.[113] And some countries (for example, Canada[114]) have adopted relatively toothless territorial tax systems as conscious subsidies for their corporate national champions. This is an economic *inefficiency* argument at work, and one that hardly should be cited as precedent for the United States, any more than one would cite export trade subsidies by another country as a principled reason for the United States to adopt tax expensing of capital investment.

To that end, policymakers should reflect on the fact that the United States, which today remains the largest economy in the world, operates an ersatz sort of territorial tax regime that in many respects — for example, its sheltering of interest and royalty income repatriated to the United States, or the costless tax system arbitrage abetted by the check-the-box regulations — is more conducive to stateless income tax planning than are more coherent territorial tax regimes. It is not surprising that other countries find it so difficult to deflect the pressures of their national champions to countenance tax competition through weak implementation of limits on territorial tax rules when those national champions can persuasively argue that the largest stateless income abusers of current law, ironically enough, hail from the United States, the last redoubt of putative worldwide taxation. It is the United States that needs to make the first move if the stateless income problem is to be addressed.

The remainder of this section considers some of the efforts in territorial tax countries to address the stateless income problem.

### C. Thin Capitalization

It is true that no major jurisdiction that uses a territorial tax system disallows interest expense incurred in the parent company's domicile on the theory that it has been incurred for the purpose of earning tax-exempt foreign dividends. But to make that assertion without qualification paints a misleading picture. In fact, several major economies reach this result through another means — thin capitalization statutes.[115]

Thin capitalization statutes traditionally were understood as source country rules that limited earnings stripping from the source country to a low-tax affiliate by limiting the introduction of excessive internal leverage within a multinational group.[116] More recent and sophisticated thin capitalization statutes go much further by limiting the amount of interest deductions allowable to the parent company of a multinational group in its country of domicile.

The German thin capitalization regime is a good example of this more sophisticated approach.[117] As applied to a German parent of a multinational group, the German thin capitalization rules impose a hard cap on interest deductions of 30 percent of

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rights and income on a sales and services basis); Maarten F. de Wilde, "Some Thoughts on a Fair Allocation of Corporate Tax in a Globalizing Economy," 38 *Intertax* 281 (2010); and de Wilde, "A Step Towards a Fair Corporate Taxation of Groups in the Emerging Global Market," 39 *Intertax* 62 (2011) (analyzing tax-induced distortions of economic behavior arising in cross-border contexts and recommending the development of worldwide tax consolidation solutions to reflect a unitary business approach, eliminating intragroup interest expense in consolidation but ultimately allocating income from real investments following OECD transfer pricing guidelines for permanent establishments); Vann, *supra* Part 1, note 46 (focusing on transfer pricing as the core stateless income tax avoidance problem, rejecting current practice as based on inappropriate market analogies that ignore the theory of the firm, and encouraging both limits on intragroup contractual freedoms and the wider use of profit-split methods).

[113]EU constitutional concerns plainly limit the ability of one member state to restrict a company's ability to re-domicile in another member state. Carsten Gerner-Beuerle and Michael Schillig, "The Mysteries of Freedom of Establishment After Cartesio," *available at* http://ssrn.com/abstract=1340964. De Wilde at least believes that constitutional concerns would not prohibit the adoption of unilateral mandatory worldwide tax consolidation by an EU member state. De Wilde, "A Step Towards a Fair Corporate Taxation of Groups in the Emerging Global Market," *supra* note 112, at 75-76.

[114]Samuels, *supra* note 109, at 1595.

[115]In 2008 an International Fiscal Association study concluded that 18 out of 34 countries examined had adopted thin capitalization statutes. *See* Alfred Storck, "The Financing of Multinational Companies and Taxes: An Overview of the Issues and Suggestions for Solutions and Improvements," 65 *Bull. for Int'l Tax*. 27, 36 (2011). For a comprehensive and recent overview, see Tim Edgar, Jonathan Farrar, and Amin Mawani, "Foreign Direct Investment, Thin Capitalization, and the Interest Expense Deduction: A Policy Analysis," 56 *Can. Tax J.* 803 (2008). *See also* Stuart Webber, "Thin Capitalization and Interest Deduction Rules: A Worldwide Survey," *Tax Notes Int'l*, Nov. 29, 2010, p. 683, *Doc 2010-23763*.

[116]Section 163(j) is an example of a source country thin capitalization statute, in this case designed to protect the United States as a source country.

[117]Wolfgang Kessler and Rolf Eicke, "Germany's Growth Acceleration Act — Taming the Sunshine Tax Legislation," *Tax Notes Int'l*, Apr. 12, 2010, p. 127, *Doc 2010-6751*, summarizes current German law. The text's description of the relevant German rules is drawn primarily from this article.

the firm's earnings before interest, taxes, depreciation, and amortization. If a German firm were to borrow extensively to invest in the equity of foreign subsidiaries (the dividends from which would be exempt), the German parent company would run into the hard cap on interest deductibility. The same rule applies to German firms as source country taxpayers.

There is only one escape clause from this outright limit on tax-advantaged leverage: A German parent company can deduct interest without limitation if its German equity-to-debt ratio (looking only at German business assets, not equity in foreign subsidiaries) is no less than 2 percentage points lower than its worldwide equity-to-debt ratio. In other words, interest expense incurred by the German parent in Germany is fully deductible only if the German parent on a stand-alone basis is no more than immaterially more highly leveraged than its non-German operations. Australia's rule is similar,[118] and Sweden recently introduced innovative debt push-down legislation.[119]

Thin capitalization statutes are growing in importance and sophistication precisely because countries that use territorial tax regimes understand how easy it is to game their tax bases in the absence of those rules through the location of external or internal debt.[120] The Council of the European Union in 2010 published a resolution on the design of European Constitution-compliant thin capitalization and CFC[121] laws.[122] This resolution recommends a very narrow scope for intra-EU CFC laws to reflect ECJ jurisprudence on the constitutional freedoms of establishment and movement of capital. But it suggests essentially no EU constitutionally-mandated restrictions on thin capitalization statutes, beyond the observation that they should reach genuine instances of thin capitalization. This resolution plainly augurs further thin capitalization statutes along the German lines in the years to come.

### D. CFC Rules

Many jurisdictions use the term "CFC" to refer to a foreign subsidiary whose income for some reason is disqualified from eligibility for that jurisdiction's territorial exemption rules. In those jurisdictions, to refer to CFC rules is to refer to antiabuse rules of one stripe or another.

In effect, when a territorial tax system adopts CFC rules, it abandons the territorial principle in favor of residence-based taxation for activities within the scope of those rules. Countries that have adopted territorial tax regimes have looked to CFC rules to limit the sorts of tax avoidance that this report describes under the rubric of stateless income.[123]

As noted in the previous subsection, far-reaching CFC rules are difficult to reconcile with EU constitutional law guarantees of freedom of establishment and movement of capital, and they hence occupy a narrower role within the European Union than might otherwise be the case.[124] Nonetheless, EU member states are reviewing their CFC rules with a view to addressing tax avoidance concerns of the same nature as those developed in this report and its predecessor, to the extent permitted by EU constitutional law.[125] In March 2011, in connection with its proposal for an EU-wide common consolidated corporate tax base (CCCTB), the European Commission recommended the adoption of a European-wide CFC rule applicable to subsidiaries outside the European Union.[126] And outside the European Union, CFC rules can play a much larger role in limiting stateless income tax planning in a territorial tax regime.

For example, in 2009 Japan abandoned a deferral and FTC regime roughly similar to U.S. law for the

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[118]Edgar et al., *supra* note 115, at 840-841. Australian thin capitalization rules deny the deduction of interest on debt of an Australian resident corporation controlled by a nonresident, if the amount of that debt exceeds a 75 percent debt-to-asset ratio. The Australian rules effectively limit the amount of debt that can be sourced domestically for interest deductibility purposes to the greater of (1) 75 percent of Australian assets and (2) 120 percent of the leverage of worldwide corporate group.

*Cf*. reg. section 1.861-10T(e) (imposing limitations for FTC purposes on interest arising on U.S. parent company debt that is disproportionately large compared with the indebtedness of its CFCs).

[119]Storck, *supra* note 115, at 35.

[120]*Id*. at 29 ("Following this trend, it can be expected that intra-group financing and leverage in general will in the future be scrutinized to a much greater extent than in the past").

[121]CFC has a different meaning outside the United States. *See* the discussion in Section VI.D., *infra*.

[122]Resolution of the Council of the European Union C 156/1, *Doc 2010-13338*.

[123]Nicolas Garfunkel, "Are All CFC Regimes the Same? The Impact of the Income Attribution Method," *Tax Notes Int'l*, July 5, 2010, p. 53, *Doc 2010-9471*.

[124]*See supra* text accompanying note 115.

[125]*See, e.g.*, Bill Dodwell et al., "U.K. Begins Corporate Tax Reform Discussion," *Tax Notes Int'l*, Dec. 6, 2010, p. 723 (discussing U.K. review of its CFC rules).

[126]European Commission, "Proposal for a Council Directive on a Common Consolidated Corporate Tax Base," COM/2011/121, at 47 (Article 82), *available at* http://ec.europa.eu/taxation_customs/taxation/company_tax/common_tax _base/index_en.htm. The CFC rule would be triggered if the statutory tax rate in the non-EU country was less than 40 percent of the average EU rate and the subsidiary located there derived primarily passive or mobile income of the sort that U.S. readers might associate with foreign personal holding company income (section 954). Most important, tainted income includes royalties from intangible assets and interest income.

taxation of income derived from foreign direct investment, and it instead adopted a territorial tax system under which a Japanese parent company can exclude from its income 95 percent of the dividends it receives on substantial investments (25 percent or more) of the stock of a foreign corporation.[127] That change has been much discussed by proponents urging the United States to adopt what this report earlier described as cartoon territoriality.

Less frequently observed is that Japan also uses a stringent CFC rule. Under it, a foreign subsidiary of a Japanese firm that has an effective tax rate of less than 20 percent (ignoring dividends from substantial participations in other foreign affiliates in the income calculation) or whose head office is in a jurisdiction that has no income tax is presumptively ineligible for the new dividend exemption regime.[128] As a result, this income is immediately taxed in the hands of the Japanese parent company.[129]

If the United States were to adopt a territorial tax system with a CFC rule similar to Japan's, income derived from an arrangement like the Google Double Irish Dutch Sandwich (described in Part 1 of this report) presumably would fail to qualify for the exemption. As the example suggests, CFC rules like Japan's thus could serve as an important constraint on stateless income tax planning in a U.S. territorial tax system.[130]

### E. Haircuts

The parent company of a multinational group typically incurs unreimbursed expenses that benefit the whole worldwide group. Groupwide external debt that is concentrated at the parent company is the most dramatic example. As discussed above, sophisticated thin capitalization statutes are a direct response to this case. However, a typical parent company will also incur many other unreimbursed groupwide expenses. In the absence of countervailing tax rules, a territorial tax jurisdiction that is the domicile of a multinational firm will find that its tax revenues are reduced by these expenses incurred to support income that is sourced to other countries and therefore exempt in the parent company's country of residence.

Many territorial regimes for the taxation of foreign direct investment address this problem through an arbitrary inclusion in the parent company's income of a fraction — often 5 percent — of otherwise exempt dividends that the parent receives from its participations in foreign operations. Japan is one example; France, Germany, and Italy are others.[131] These haircuts are administratively useful tax solutions, but they address only a small part of the stateless income problem — as demonstrated by the eagerness of U.S. corporate proponents of cartoon territoriality to offer them up.

### F. Formulary Apportionment

The fundamental crisis confronting all territorial tax systems today is that they allocate taxing rights among nations solely by reference to the geographic source of a firm's profits, but there is a strong consensus that the existing source rules are unimplementable in practice and conceptually bankrupt. As a result, many observers have agreed that a world in which territorial taxation is the model for taxing foreign direct investment requires the adoption of some sort of (ideally coordinated) formulary apportionment of income method as the mechanism for allocating a multinational enterprise's global income to source countries.[132] That method in turn could be applied to all group activities on a consolidated basis (a unitary approach) or to a subset of activities in which arm's-length pricing methods appear particularly deficient as a conceptual and administrative matter.[133]

In short, a powerful case can be made that a well-ordered territorial tax system necessarily implies the systematic application of formulary apportionment rules for at least some of a multinational group's activities in order to add some economic foundation and consistency to the concept of source. The European Union in March 2011 took a major step in that direction when the European Commission released a detailed proposal for a pan-EU CCCTB.[134] It was the culmination of a project begun 10 years earlier.

If approved by the European Parliament and agreed to unanimously by the European Union's member states, the CCCTB would permit a firm with operations in the European Union to elect to

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[127]Lawrence Lokken and Yoshimi Kitamura, "Credit vs. Exemption: A Comparative Study of Double Tax Relief in the United States and Japan," 30 *Nw. J. Int'l L. & Bus*. 621, 628 (2010).

[128]*Id*. at 641-642.

[129]*Id.*

[130]This also is Lokken and Kitamura's conclusion, *id.* at 643-645.

[131]Samuels, *supra* note 109, at 1595.

[132]*See, e.g*., Reuven S. Avi-Yonah and Ilan Benshalom, "Formulary Apportionment — Myths and Prospects" (Oct. 16, 2010), *available at* http://ssrn.com/abstact=1693105; Reuven S. Avi-Yonah, Kimberly A. Clausing, and Michael C. Durst, "Allocating Business Profits for Tax Purposes: A Proposal to Adopt a Formulary Profit Split," 9 *U. Fla. Tax. Rev*. 497 (2009); Reuven A. Avi-Yonah and Kimberly Clausing, "Reforming Corporate Taxation in a Global Economy: A Proposal to Adopt Formulary Apportionment," in *Path to Prosperity: Hamilton Project Ideas on Income Security, Education, and Taxes* 319-344 (2008).

[133]Avi-Yonah and Benshalom, *supra* note 132.

[134]European Commission, *supra* note 126.

consolidate its EU operations and then to apportion its consolidated net EU income among the members of the group (and member states) in accordance with a formula. The commission summarized that formula as follows:

> The formula for apportioning the consolidated tax base should comprise three equally weighted factors (labour, assets and sales). The labour factor should be computed on the basis of payroll and the number of employees (each item counting for half). The asset factor should consist of all fixed tangible assets. Intangibles and financial assets should be excluded from the formula due to their mobile nature and the risks of circumventing the system. The use of these factors gives appropriate weight to the interests of the Member State of origin. Finally, sales should be taken into account in order to ensure fair participation of the Member State of destination. Those factors and weightings should ensure that profits are taxed where they are earned. As an exception to the general principle, where the outcome of the apportionment does not fairly represent the extent of business activity, a safeguard clause provides for an alternative method.[135]

The proposal does not seek to harmonize tax rates, which would be left to each member state.

In light of the administrative failures and conceptual bankruptcy of the arm's-length standard, some sort of formulary apportionment may be necessary for any well-ordered territorial tax system. But formulary apportionment is not a panacea, and it brings with it its own implementation and abuse problems.[136] The system can be gamed through the relocation of relatively fungible real assets or personnel to low-tax jurisdictions (to attract a disproportionate amount of groupwide net profits) or by the acquisition of low-value-added but high-volume businesses (for example, a grocery store chain) in a low-tax jurisdiction to augment the sales factor in that jurisdiction.[137] This in turn requires responses such as authorizing tax administrators to divide firms into different subgroups when necessary to prevent abuse. In the absence of a multilateral implementation along the lines contemplated by the European Union, formulary apportionment also has been criticized as likely to lead to under- or overtaxation because its goals of taxing income where earned will be defeated by the competing measurement systems.

## VII. Worldwide Tax Consolidation

### A. Introduction

The logical alternative to a territorial tax system is a worldwide global tax consolidation (or full-inclusion) model.[138] Again, this is not the same as the current U.S. system for taxing foreign direct investment. A genuine worldwide tax model would effectively consolidate the operations of foreign subsidiaries with those of the parent company for tax purposes, just as they today are consolidated for financial accounting purposes, and it would impose residual U.S. tax, net of an FTC, on a current basis, regardless of where the income is retained as a cash matter.[139]

A worldwide tax consolidation system has some important advantages over the current U.S. rules applicable to foreign direct investment. First, it removes the lockout constraint on repatriations of foreign earnings. Territorial tax solutions address the problem by never taxing foreign earnings, and a true worldwide tax consolidation system does so by always taxing them, so that there is no incremental cost to repatriation.

Second, a worldwide tax consolidation solution treats losses symmetrically with income. Symmetry in the taxation of losses and income is critical to accurately taxing capital income.[140] Current law is asymmetrical in that a foreign subsidiary's losses do not directly give rise to reductions in U.S. tax,

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[135]*Id.* at 14, para. (21).

[136]*Compare* Altshuler and Grubert, "Formula Apportionment: Is It Better Than the Current System and Are There Better Alternatives?" 63 *Nat'l Tax J.* 1145 (2010), *with* Avi-Yonah and Benshalom, *supra* note 132.

[137]Altshuler and Grubert, *supra* note 136.

[138]A worldwide imputation system was recommended in Samuel C. Thompson Jr., "An Imputation System for Taxing Foreign-Source Income," *Tax Notes*, Jan. 31, 2011, p. 567, *Doc 2011-94*, or *2011 TNT 21-6*. That paper reviews some of the same issues considered here but is ambiguous as to whether the system the author contemplates would be tantamount to complete tax consolidation, in which net losses and net income of foreign subsidiaries would be includable in a U.S. parent company's tax return.

[139]The ownership threshold for consolidation of foreign subsidiaries should be the direct or indirect ownership of stock comprising more than 50 percent by vote or value of the stock of the foreign corporation. Consolidation would be mandatory in these circumstances. For a conflict between two U.S. shareholders, one of which owns more than 50 percent of a domestic firm's voting stock and the other more than 50 percent of the value of that firm's stock, an arbitrary tiebreaker rule would be required.

It also may be necessary to retain current-law principles to address companies that today are CFCs but that have no U.S. shareholder with enough control to consolidate that company. These cases are rare.

[140]Edward D. Kleinbard, "Designing an Income Tax on Capital," in Henry J. Aaron et al., *Taxing Capital Income* 168-169 (2007).

while foreign income ultimately is includable in the U.S. tax base if and when repatriated. Both territorial and worldwide tax consolidation systems eliminate this distortion. In the territorial case, that is because foreign operating earnings are taxed by the residence country at a zero rate, and conversely no deductions are available in the residence country for foreign losses. In the worldwide tax consolidation case, that result follows from the extension of tax consolidation to foreign operations, so that foreign operating losses (including losses incurred by a foreign subsidiary) are fully available to offset domestic income.

Third, a worldwide tax consolidation system by definition satisfies the traditional capital export neutrality benchmark. This is not the only relevant goal in designing an international tax system, but it is not a bad thing if it can be obtained without introducing other major distortions in taxpayer behavior.

More generally, a worldwide tax consolidation system focuses policymaker attention on domestic productivity and competitiveness, as well as on international business competitiveness, because the tax system links the two. Territorial tax systems do not implement neutrality in investment location decisions in a world imbued with stateless income.

Fourth, and most critically for the themes developed in this report, a worldwide tax consolidation system directly addresses the problem of stateless income. Under such a regime, a multinational business enterprise obtains no advantage from generating stateless income if its average effective foreign tax rate before taking stateless income into account is no higher than the residence jurisdiction tax rate.[141] The reason is that income moved to a low-tax foreign jurisdiction is still taxed in the residence country at the latter's rates.

A worldwide tax consolidation system thus is a unilateral response to stateless income tax planning that is still highly effective at curbing the problem. By contrast, territorial tax systems have only limited tools available to protect the income base in source countries short of hypothesizing multilateral coordinated solutions involving novel implementations of universal formulary apportionment rules.

Fifth, a worldwide tax consolidation system resolves two specific large and otherwise intractable administrative problems embedded in stateless income tax planning. Worldwide tax consolidation substantially aids transfer pricing enforcement, because again there is no advantage to using aggressive transfer pricing strategies to move income from the residence country to a low-tax foreign affiliate or even from one foreign affiliate to another (provided that the average effective foreign income tax rate does not exceed the residence country rate).[142]

Worldwide tax consolidation also simplifies the problem of expense allocations. In a worldwide tax consolidation system, expense allocation rules are not a critical component of the allocation of taxing rights, because every item of global income and expense is reflected currently on the parent company's tax return. If firms were tax-indifferent across this dimension, one would expect that expenses generally would be booked in the jurisdictions to which they have the strongest commercial nexus.[143]

Nonetheless, as described below, thin capitalization statutes may be necessary even to worldwide tax consolidation regimes. Without a thin capitalization statute, U.S. firms might otherwise be indifferent to the magnitude of their foreign tax liabilities, because of the FTC.[144]

### B. Elements of Worldwide Tax Consolidation

It is useful to summarize the contours of a system that could be proposed as an alternative to territorial taxation. As applied to the United States, a worldwide tax consolidation regime for taxing foreign direct investment that is incremental to current law would contain the following elements:

- Reduce the U.S. corporate tax rate significantly (to bring it into conformity with evolving world norms and improve the competitiveness of the U.S. domestic economy) and eliminate current corporate tax expenditures such as accelerated depreciation. The rate necessary to achieve the international conformity goals might fall in the range of 25 to 27 percent.
- Tax the worldwide income of U.S.-domiciled firms on a current basis by bringing foreign affiliates into the U.S. consolidated group (to

[141]The text here assumes an FTC mechanism that permits some amount of cross-crediting, as does the current U.S. system. It is a fair question, however, whether current law or the law of cross-crediting circa 1986 would better implement that mechanism, particularly considering the need to encourage U.S. taxpayers to minimize foreign tax liabilities.

[142]This is the theme of Kleinbard, "Throw Territorial Taxation From the Train," *Tax Notes*, Feb. 5, 2007, p. 547, *Doc 2007-416*, or *2007 TNT 25-65*.

[143]Of course, source countries have reason to police the expense allocations to subsidiaries operating in their jurisdictions, because as to them there is no residual tax fallback.

[144]This is consistent with the concerns expressed by Daniel Shaviro in three papers. *See* Daniel Shaviro, "The Case Against Foreign Tax Credits," NYU Law & Economics Research Paper Series Working Paper No. 10-09 (Mar. 2010); Shaviro, "Rethinking Foreign Tax Creditability," NYU Law & Economics Research Paper Series Working Paper No. 10-30 (July 2010); Kimberly A. Clausing and Daniel Shaviro, "A Burden-Neutral Shift From Foreign Tax Creditability to Deductibility?" NYU Law & Economics Research Paper Series Working Paper No. 10-39 (Aug. 2010).

remove the attribute of stateless income and to protect the domestic tax base from earnings stripping by U.S. firms).[145]

- Retain the existing FTC system in general.
- Revise the definition of U.S. corporate residence to reflect the mind and management of a company, not simply its place of incorporation.
- Abandon existing interest expense allocation rules for purposes of calculating the FTC, because they are unnecessary in an environment of current worldwide taxation (and thereby reduce the total tax burden on foreign direct investment that might result for companies whose operations are predominantly in foreign jurisdictions with relatively high tax rates).
- Adopt thin capitalization rules that protect the U.S. base both as to parent companies of multinational groups that are resident in the United States and as to U.S. subsidiaries of multinational groups whose parent companies are foreign residents.

### C. Competitiveness Concerns

Worldwide tax consolidation is unpopular among multinational companies, which enjoy the freedom under current law to reduce their effective tax burdens to a small fraction of weighted average statutory rates, and among many scholars, who rightly see it as in theory distorting investment decisions when compared with an ideal (and unobtainable) territorial tax. Those are important concerns. That many multinational companies overstate their case does not mean there is no case to be made. But there is a reasonably satisfactory response, which is the coupling of worldwide tax consolidation with tax rates comparable to a relevant global median rate.

The operation of tax capitalization into prices in low-tax jurisdictions in fact may mean that U.S. firms are not competitive in bidding to own or hold real factors of production there. Nonetheless, the United States ought not to be held hostage in its tax system design to the existence of low-tax locales, for the simple reason that they are such a small fraction of the world's real economy that the deadweight loss associated with imperfect rules as applied to them is insignificant when compared with the deadweight and revenue losses associated with stateless income gone wild.

Many low-tax jurisdictions are the depositories of enormous amounts of multinational firm taxable income from both U.S. and foreign corporations. But when presented as a competitiveness argument, this is not a tax capitalization or capital ownership neutrality story. Rather, it is akin to a competition in export subsidies. That is, because some countries have poorly implemented territorial tax systems, thereby enabling their national champions to funnel income from high-tax to low-tax countries through stateless income tax planning, the United States should do so as well.

As in the competition among nations to outdo each other in export subsidies, the economically rational behavior here is to abstain. Moreover, in light of the leading role the United States plays as an abettor of stateless income tax planning by its national champions, there is reason to believe that more balanced U.S. rules will enable other sovereigns to address weaknesses in their policing of aggressive stateless income generation by their own national champions. Finally, confusing tax subsidies with tax policies ignores the steps that many major jurisdictions already have taken to strengthen their territorial tax systems.

The genuine competitiveness and capital ownership neutrality issue for U.S. firms on the adoption of worldwide tax consolidation would be to ensure their competitiveness regarding the location of actual factors of production in the world's major economies. If the U.S. worldwide consolidated tax rate is comparable to world norms looking at relevant other economies, legitimate competitiveness concerns are addressed in relation to foreign local competitors in particular and also to multinational competitors domiciled in jurisdictions that take territorial tax system design seriously.

The tax rate data summarized earlier in Part 1 imply that a worldwide consolidated tax rate in the neighborhood of 25 to 27 percent would satisfy both genuine competitiveness concerns and the capital ownership neutrality benchmark for the world's major economies — in the latter case, not because a worldwide consolidated tax regime was the theoretically correct design, but because the rate actually used by the United States on worldwide income would correspond to the range of tax rates reflected in the tax capitalization of asset prices in the relevant countries. The United States does not need to compete with the tax rates available to domestic firms in the Slovak Republic (19 percent, as it happens) for U.S. firms to be globally competitive.

Just as important, those lower U.S. rates make the domestic operations of U.S. firms more competitive in the world as well. Given the size of the U.S. economy and the dominant role therein of U.S.-based firms, this is an important issue, even if it is largely unaddressed in recent tax policy debates designed to influence the decisions of policymakers.

[145] *See supra* note 139, for a description of the modifications that would need to be made to current law's definition of the ownership requirements that would trigger consolidation.

### D. Meaninglessness of Residence

The second problem associated with a worldwide tax consolidation regime is that, like territorial systems, it is vulnerable to the criticism that it relies on an artificial conceptual foundation. For territorial systems, that artificiality lies in the definition of source, which operates to allocate among jurisdictions the right to tax the item of income. For worldwide tax consolidation systems, the artificiality lies in the concept of corporate residence.[146]

Certainly it is true that the most sophisticated multinational enterprises can be described as having transcended ordinary concepts of citizenship in only one state. And of course the current U.S. definition of corporate tax residence (which looks solely to the place of incorporation) is artificial. But it is difficult to think of many significant examples of firms that in the popular imagination are U.S.-domiciled but that as a tax matter are not. In many cases the practical tax categorization of the residence of a parent firm of a multinational group is easier than theory might suggest.[147]

There are more national ties between U.S. firms and their owners than one might expect. For example, in 2004 U.S. investors owned 87 percent of the aggregate value of firms traded on U.S. stock markets (overwhelmingly firms treated as U.S. residents).[148]

The strongest justification for the existence of a corporate income tax is that it serves as a substitute for the imposition of current tax on the firm's owners. When (as in small open economies) there is only a partial correspondence between the residence of a firm and the residences of its owners, the case for a worldwide tax consolidation system that elevates the consequences to nonresident investors of the parent company's domicile is proportionately weakened, and a territorial tax system is closest to implementing economic neutrality, given the portfolio investment options of nonresident shareholders.

But as applied to the United States, whose resident companies are overwhelmingly owned by U.S. investors, the rationale for worldwide taxation along this margin is strong. In other words, if the U.S. corporate income tax is best justified as a substitute tax on U.S. individual owners when the corporation is both domestically owned and operated, and if it also is accepted that taxing U.S. individuals on their worldwide income is an appropriate exercise of U.S. taxing power from an economic perspective (again accepting as a given a tax system that burdens capital income), then it must follow that imposing U.S. corporate income tax on the worldwide income of firms that are overwhelmingly ultimately owned by U.S. persons also is theoretically sound.

In short, U.S. firms (however defined) are overwhelmingly owned by U.S. persons, treating them as U.S. persons is a fair first-order approximation of a more sophisticated answer. And the artificial current statutory definition of corporate residence in turn can be modernized to look to a company's mind and management (the U.K. concept) rather than simply its place of incorporation. As so modified, the rule might retain some artificiality, but the consequences of the application of that artificial rule do not seem hugely distortive.

Modernizing the technical definition of corporate residence is a partial answer to something that in practice is more a political talking point than an urgent matter of tax policy. That is the concern that if the United States were to adopt a worldwide tax consolidation regime, U.S. firms would re-domicile outside the United States or offer themselves up for acquisition by non-U.S. enterprises, all to escape the burdens of the new U.S. system, and newly created U.S. businesses would incorporate outside the United States.

The first response to this concern, of course, is that developed in the preceding subsection: A tax burden squarely in the median of other major relevant economies' (that is, ranging from 25 to 27 percent) is not much of a competitive burden at all, except if one believes that all those other economies will continue to countenance unlimited stateless income tax planning by their national champions. But as noted, this is at best an argument for matching other countries' government subsidies, not a

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[146]*See, e.g.*, Shaviro, ''The Rising Tax-Electivity of Corporate Residence,'' NYU Law and Economics Research Paper No. 10-45 (Oct. 1, 2010), at 70, *available at* http://ssrn.com/abstract=1683642. (''In an increasingly integrated global economy, with rising cross-border stock listing and share ownership, it is plausible that U.S. corporate residence for income tax purposes, with its reliance on one's place of incorporation, will become increasingly elective for taxpayers at low cost. This trend is potentially fatal over time to worldwide residence-based corporate taxation, which will be wholly ineffective if its intended targets can simply opt out'').

[147]Vann, *supra* Part 1, note 48, at 307-308 (in practice, ''the test of corporate residence generally is robust for the parent in an MNE group,'' but not for its foreign subsidiaries).

[148]Philip R. Lane and Gian Maria Milesi-Ferretti, ''International Investment Patterns,'' Int'l Monetary Fund Working Paper WP/04/134 (2004), at 31. The U.S. domestic stock market capitalization represented 49 percent of the world's stock market capitalization in that year. *Id. See also* Anil V. Mishra, ''International Investors' Home Bias in Portfolio Equity Investment,'' *available at* http://www.eprints.usq.edu.au/2176/2/Mishra_2007_International_inves tors.pdf (2007) (analyzing some of the factors that explain investors' marked bias in favor of investing in companies they identify as resident in their home countries).

genuine competitiveness argument, and one that in any event is not relevant to foreign competitors in their domestic markets.

Second, the United States today has an anti-inversion statute that prevents a U.S. firm from simply situating a foreign holding company on top of it.[149] That statute is imperfect in its reach,[150] but those imperfections reflect a political judgment, not the existence of irresolvable technical difficulties in broadening its application.

Third, a more modern definition of corporate residence responds to the claim that in a worldwide tax consolidation system, simply organizing a U.S. business as a foreign corporation will lead to tax savings. If U.S. individuals are the mind and management of an organization, it will be a U.S. firm, regardless of its place of incorporation.[151]

Fourth, existing law imposes a prohibitive toll charge on the transfer of U.S. business assets to a foreign firm in a tax-free incorporation or reorganization transaction.[152] Those rules can also apply to tax-free stock acquisitions in which the stock of a U.S. firm is acquired by a foreign company and U.S. shareholders control the combined enterprise.[153] Again, these rules might not be watertight, but if there is still a bona fide competitiveness concern regarding tax-free acquisitions, any remaining gaps can readily be closed.

Finally, it is useful to compare the definitional problems that must be solved in implementing a successful territorial tax regime with the different definitional issues raised by a worldwide tax consolidation system. As described above, territorial tax systems satisfy coherent economic norms only when used in a world where source rules for both income and expenses are transparent, comprehensive, and non-distortionary. To accomplish this requires the efforts of many sovereigns to introduce effective thin capitalization and other anti-base-erosion legislation, as well as agreement among those sovereigns on novel source rules on matters like the situs of income earned from the use of intangible assets. For the reasons explained earlier, it is likely that those source rules will require the multilateral adoption of formulary apportionment principles covering significant swaths of firms' incomes.

By contrast, a worldwide tax consolidation system can be implemented unilaterally, but is vulnerable to the risk that its definition of a corporate resident will prove to be overinclusive in some instances and underinclusive in others. The key difference is that the consequences of an imperfect definition of corporate residence will affect only those firms at the margin of whatever definition is adopted. In a territorial tax world, every multinational firm will be able to exploit weaknesses in different (or for that matter, identical) definitions of source or the decision by one or more countries not to join the new world order. Each approach to the taxation of foreign direct investment is vulnerable to definitional imprecision, but the aggregate consequences of those failings for neutrality in economic decision-making would not appear to be comparable at all.

### E. Disincentivizing Foreign Tax Reduction

A third concern that would be raised on the adoption of a worldwide tax consolidation system would be that resident multinational firms would have no incentive to reduce their foreign tax burdens, at least as long as their average effective foreign tax rate was below the residence country rate.

A partial answer, of course, lies in choosing the right residence country rate. The lower it is, the more aggressively firms will be required to pursue local source country tax minimization strategies. A more complete answer would be that when placed in an environment of worldwide tax consolidation, firms generally can be expected to site their income where their business operations are located, because tax results will then comport with the firm's real factors of production and with how income is recorded for management purposes.

There is little reason for a U.S. firm deliberately to overpay a foreign source country just to spite the United States. And of course if it did, the resulting taxes would not be creditable, because current law provides that taxes are creditable only to the extent

[149]Section 7874.

[150]West, *supra* note 109, at 1025, n.112.

[151]Almost all of the enormously successful "new economy" firms created in the last few years that were organized by U.S. entrepreneurs were formed as U.S. corporations. Facebook, Google, and Amazon are three examples. It might be argued that the stakes will be raised once worldwide tax consolidation is introduced, but the counterpoint is that today it is virtually costless to organize as a foreign firm while in the future it will require relocating senior management and board of directors supervision outside the United States. Yet despite the clear tax advantages to organizing as a foreign firm (*e.g.*, never dealing with subpart F and avoiding the lockout price that must be paid for stateless income tax planning) and the ease of doing so, real-life examples of successful new public firms that have organized as foreign firms are hard to find. (Some years ago several new enterprises organized as offshore companies from the start, but some of those (*e.g.*, Global Crossing) have since collapsed.)

[152]Section 367(a). Essentially, such a transfer is treated as wholly taxable, so that gain is recognized on the entire value of transferred assets (less their tax basis) at the time of transfer.

[153]Section 367(b).

of the legal minimum due.[154] It seems much more probable that the United States would collect residual tax not collected today from operations in low-tax countries than it is that all this potential residual tax will be secretly bargained away by firms looking to curry favor with source country tax administrations.

Admittedly, a problem exists in worldwide tax consolidation regimes regarding the siting of indirect expenses, particularly interest expense. Current practice and financial markets behavior show that in the absence of any countervailing rule, parent companies would likely undertake nearly all group external debt funding. Capital markets ordinarily prefer parent-level financing because all the group's operations then support the loan and because the agency costs associated with policing parent-subsidiary transfer pricing and transactions are irrelevant.

A parent company would have no incentive to fund foreign subsidiaries with anything other than equity, the result would be residence country base erosion. The resulting foreign operating income would be includable in the parent's worldwide consolidated tax return but would be sheltered by FTCs. As U.S. firm's aggregate worldwide tax burden would be the same as if the group's external debt were distributed throughout the group's member companies, but the United States as residence country would be a revenue loser and source countries' revenue would be winners. Because the United States is still a private direct investment net investor,[155] this suggests that U.S. revenues could be at risk.

This problem can be addressed by a well-designed thin capitalization statute like the German rules described earlier. A well-designed thin capitalization statute functions in practice as a form of worldwide interest apportionment, after firms apply straightforward internal financing decisions as a kind of self-help mechanism. What is more, it does so without requiring the tracing of proceeds by taxpayers or multilateral agreements among countries.[156]

A final problem with worldwide tax consolidation is that it limits a sovereign's flexibility in setting corporate income tax rates. For the reasons described earlier in this subsection, a sensible worldwide tax consolidation system requires that a country's corporate tax rates be comparable to world median rates. Because these rates would apply to domestic as well as to international operations,[157] the result would be a circumscribed range of plausible corporate tax rates that a country might adopt. The only answer to this is that in a global economy, the tax rates imposed on domestic capital income (as well as on income from foreign investments) are an important part of the overall competitiveness of local firms. It may be that the tail (the taxation of foreign direct investment) should not wag the dog, but if one consequence of adopting an otherwise useful scheme for the taxation of foreign direct investment is that the dog is nudged closer to world norms, that is not an undesirable outcome.

## VIII. Conclusion

We live, and design tax systems, in a world imbued with stateless income and with dramatically different national corporate income tax rates. Territorial tax solutions are vulnerable to the former condition, and worldwide tax systems to the latter. There is no approach that is optimal everywhere. All that we can do is to consider which system is likely to create the fewest distortions in corporate behavior while raising adequate revenues.[158]

As applied to the United States, both territorial and full inclusion tax systems resolve the distortions attendant on the lockout phenomenon and introduce symmetry in the treatment of offshore losses. These are substantial steps forward. But in a world imbued with stateless income, a territorial tax system like that proposed by some U.S. multinational firms will lead to large systematic preferences for investing outside the United States to obtain an all-in lower effective tax burden on income, even when "tax" is understood to include implicit as well as explicit taxes. As a result, corporate investment and ownership decisions will be systematically distorted.

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[154]Reg. section 1.901-2(e).

[155]*See* JCT, "Economic and U.S. Income Tax Issues Raised by Sovereign Wealth Fund Investment in the United States," JCX-49-08 (June 17, 2008), at 16-17, *Doc 2008-13379*, *2008 TNT 118-13* (in 2006 foreign direct investment by U.S. persons outweighed direct investment into the United States by foreign persons by roughly $800 billion, measured at cost).

[156]*Compare* Graetz, "A Multilateral Solution for the Income Tax Treatment of Interest Expenses," *supra* Part 1, note 46 (urging a multilateral solution).

[157]It is possible to imagine split tax rates, with different rates imposed on domestic and foreign income, but that would import many of the weaknesses of current law (transfer pricing disputes, stateless income tax planning more generally, importance of the definition of source of income, allocations of expenses, and so on). On balance, a split rate approach would seem to be too complex and insufficiently ungrounded in principle to be useful.

[158]*Cf.* Grubert and Altshuler, "Corporate Taxes in the World Economy," *supra* Part 1, note 23, at 320 ("it [is] clear that no one-dimensional criterion is useful and that a complete evaluation of any reform proposal is probably not feasible. . . . Nonetheless, it is clear that progress can be made along a number of decision margins").

Moreover, a poorly implemented territorial tax system will greatly compound existing problems in enforcing transfer pricing rules necessary to protect the domestic tax base, and unless accompanied by strict expense allocation rules not currently contemplated by territorial tax advocates, that system will expose the domestic tax base to losses through straightforward arbitrage. In the absence of vigorous (and perhaps untested) rules to address these problems, a territorial tax solution will lead to large-scale incremental domestic tax base erosion.

Unless the stateless income phenomenon is eradicated, the United States' adoption of a territorial tax system would distort corporate investment behavior and deplete domestic tax revenues. And in turn, eradicating stateless income would require unprecedented levels of international cooperation and substantive agreement on novel tax norms. It is easy to understand the appeal of such a system to U.S. multinational firms, and even to understand why an ideal territorial tax system is the better economic answer in a Panglossian world, but it is less obvious why a territorial system should be the preferred outcome from a practical policy perspective in light of the substantial risks it poses.

A worldwide tax consolidation system coupled with a corporate tax rate in the range of the world median for comparable economies, when combined with a thin capitalization regime, addresses transfer pricing gaming and tax arbitrage strategies. It can be implemented unilaterally and does not depend heavily on parsing the mysteries of expense allocation rules. It authentically embraces capital export neutrality (except in the unlikely scenario in which U.S. corporate tax rates are materially lower than the world median), which may not be everything, but at least is something. It effectively creates results consistent with capital ownership neutrality principles in most cases if one corrects for actual subsidies that some sovereigns may run through their tax systems.

There are two irreducible costs to be paid for the benefits of a full inclusion system. U.S. firms will not be tax competitive in bidding for real assets (or companies) in genuinely low-tax jurisdictions, and U.S. firms will not receive the de facto subsidies that stateless income tax planning offers foreign competitors in jurisdictions with poorly implemented territorial systems for investments in high-tax third countries. As to the first cost, most genuinely low-tax jurisdictions are small economies, and if the protection of the domestic tax base and the removal of systematic incentives for U.S. firms to invest outside the United States require that U.S. firms be somewhat disadvantaged in this one dimension, that would appear to be a fair trade-off.

As to the second cost, it is difficult to see why the United States should respond to systematic tax subsidies offered by other countries for their resident firms to invest offshore by mimicking that behavior, any more than it is thought to be efficient for one country to respond to another's trade subsidies by implementing comparable subsidies.[159] Moreover, as the erosion of domestic source country tax revenues through stateless income becomes better appreciated throughout the world's major economies, one can expect increased focus on developing stronger domestic earnings stripping rules. As source countries slowly become more adept at designing earnings stripping rules, any remaining gap in competitiveness between U.S. and foreign firms will narrow.

The United States today faces a Hobson's choice between the highly implausible (a territorial tax system with teeth) and the manifestly imperfect (worldwide tax consolidation). Because the former is so unrealistic, while the imperfections of the latter can be mitigated through the choice of tax rate, the worldwide tax consolidation solution, coupled with a much lower corporate income tax rate, is the more productive approach that the United States should take.

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[159]*Id.* at 342 ("the case of intangible assets is identical to the case of exports because it is simply the export of U.S. created services. They are intellectual property that was created in the United States, the value of which has not been included in the U.S. tax base. It is in principle possible that selective export subsidies would improve U.S. welfare, but this would require information about market behavior which is unlikely to be available, apart from any World Trade Organization (WTO) concerns. The same argument would apply to exports of intellectual property").

# Large companies good at avoiding taxes

Top Finance ministry official says corporate taxes will be harder to collect in future

Lasse Arvela


Finland's nine largest listed companies paid a combined EUR 448 million in corporate taxes in 2010. In the same year, the same companies posted pre-tax profits of EUR 8.3 billion.

Tax revenue ending up in Finland constituted 4.5 per cent of the results of these companies.

Taxes paid by large export companies were especially small.

**For instance, Nokia** paid just EUR 1.6 million in Finnish taxes out of its result of EUR 1.8 billion.

Metso reported profits of EUR 548 million and Nokian Tyres reported a EUR 209 million result. Neither of the two paid any taxes at all to Finland.

The low tax yield was partly attributed to deductions for past losses, and partly to skilful tax planning.

**The figures** are from an investigation by *Helsingin Sanomat* comparing the taxes paid by Finnish listed companies with a market value of more than EUR 4 billion to their financial results in 2010.

These companies paid a total of EUR EUR 1.6 billion around the world – more than 19 per cent of their results. This means that most of the profits of large Finnish companies are paid abroad.

**This is partly the result** of international tax planning. Global companies seek to post their profits in countries where the tax rates are low.

For instance, the forest industry company Stora Enso has made a deal with The Netherlands under which it pays The Netherlands a 1.5 per cent tax on sales profit of wood pulp that it takes from Brazil to Finland. In Finland the tax would be 24.5 per cent.

Profit figures and the amounts of tax paid are not directly comparable, because companies file different financial statements to their investors than what they submit to tax authorities. They are nevertheless an indication of the scale of how taxes are targeted.

**It has long been thought** in Finland that corporate tax rates need to be brought down to a level that would make Finland more competitive . On Thursday Sweden said that it planned to lower its corporate tax rate to 22 per cent.

In spite of lower tax rates, it is harder than before to collect corporate taxes from genuinely international Finnish companies, because certain EU countries, especially The Netherlands, have started to aggressively hoard tax revenue.

**There are two ways in which a country** can do this – either through secret tax agreement made directly with companies, or with certain "precision weapons".

The most controversial precision weapon is the Dutch "innovation box". The Netherlands has promised a five per cent tax rate for corporate income that is based on the company's own innovation, patent, or other non-material rights.

For instance, a significant proportion of the income of Nokia, or some other information technology company, could be classified as being based on its own product development, and when control of these rights passes to The Netherlands, the tax income goes there as well.

**"The Dutch are masters** at concentrating these kinds of regulations and practices", says **Lasse Arvela**, head of the tax department of the Ministry of Finance. "This [innovation box] is the most dangerous recent development. Reducing the tax rate will not help it any more."

Companies in Finland have already threatened politicians that they will move their non-material rights to The Netherlands if Finland does not adopt a similar system. The Research Institute of the Finnish Economy (ETLA) is also promoting the same thing.

If Finland were to follow the example of the Dutch, the flow of tax income to The Netherlands would slow down, but the move would also erode the corporate tax base.

**Lasse Arvela, is it really the case that large global companies will pay taxes to Finland only out of reasons of public image?**

"This is the case to a certain degree. The trend is in that direction. This form of taxation really is declining. I seriously fear that corporate taxation will not be a key form of levying taxes for very long."

**The EU and OECD countries** have tried to bring more uniformity to the taxation systems of different countries, but they have not managed to curb the use of precision attacks.

However, Arvela points out that EU countries struggling with their economic difficulties have focused on their own interests, and the capacity of the EU to enact reforms does not look good for the next 5-10 years, which are expected to be a period of slow growth.

The trend in the EU is to focus taxation on consumption. Indirect taxes, such as property taxes are also likely to go up.

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Helsingin Sanomat

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# U.S. Corporations Act Responsibly in Reducing Foreign Taxes

Tax (Photo credit: 401K 2012)

The U.S. is indisputably number one in one category—it imposes the highest tax rate on corporate income of any industrialized country.

The combined U.S. federal and state corporate income tax rate is approximately 40%. This rate may be compared with 33% in Germany, 26% in Canada, 25% in China, 24% in the U.K. and 12.5% in Ireland. The take-away is that earning income from conducting business operations in any other country will reduce a company's tax costs—even in Japan, which recently reduced its corporate tax rate to 38%.

Additionally, the effective tax rate in many countries can be significantly lower than the nominal rate. For example, China provides tax holidays or rulings reducing the effective tax rate on certain corporate income to 15% or 20%. Some countries, such as the Netherlands and the UK (effective in

property income at lower rates (e.g., 10%). Moreover, a number of countries permit intra-group structures generating large local deductions for interest and royalties, thereby significantly lowering the tax costs of business operations in their countries.

Several articles in the press have criticized structures used by U.S. multinationals to lower the tax costs on their foreign business operations as if these structures were somehow bad. ("Google 2.4% Rate Shows How $60 Billion Lost to Tax Loopholes" (Bloomberg.com, 10/21/10) and "How Apple Sidesteps Billions in Taxes" (New York Times, 4/28/12)). But the "offending" structures reduce *foreign* taxes, not U.S. taxes. And count on it—foreign based multinationals are using the same techniques to minimize their foreign tax costs.

A suggestion that the U.S. should not permit a U.S. company to benefit from reducing its foreign tax costs—e.g., by imposing immediate U.S. tax on the low taxed foreign income of a U.S. company's foreign subsidiaries—seems unwise. How long will a U.S. company survive as an independent company if it has a built-in cost structure that is 10% or 15% higher than its competitors? Will the next big start-up company locate in the U.S. with such a cost disadvantage?

Indeed, discouraging U.S. companies from reducing foreign taxes can cost the U.S. government money. Every dollar a company pays to a foreign government will ultimately cost the U.S. treasury a dollar because the U.S. must provide a dollar-for-dollar credit for foreign taxes paid on foreign income, under both the U.S. tax code and bilateral U.S. treaties with most of our major trade and investment partners. Forcing U.S. corporations to pay more foreign tax will only increase our already huge deficit.

For this reason, the U.S. tax rules governing the dollar-for-dollar foreign tax credit require a U.S. company to exhaust all effective remedies to reduce its taxes under foreign law, or else the credit will be denied—in other words, U.S. law expects a U.S. company to take responsible measures to reduce its foreign tax liability, because this has long been understood to be in the national interest. My recent blog entitled, **"Beware of Double Taxation of Foreign Profits"** discusses this point. Some of the recent legislative proposals and press accounts seem to have lost sight of this fact.

Despite suggestions by some, there is no clear evidence that lower foreign taxes on income earned outside the U.S. causes jobs to leave the U.S. Indeed,

the structures criticized in the press accounts typically have the effect of lowering a company's overall effective tax rate *without* requiring the migration of jobs to other countries. The greater threat to U.S. jobs may actually lie in the legislative proposals to attack these structures, some of which would have the perverse effect of encouraging the migration of jobs to foreign countries by penalizing the performance of high-value activities (like R&D) in the U.S.

A U.S. corporation acts responsibly when it seeks to minimize its foreign taxes to the extent permitted under foreign law, and this is good for America.

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# FIXING THE SYSTEM: AN ANALYSIS OF ALTERNATIVE PROPOSALS FOR THE REFORM OF INTERNATIONAL TAX

by

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# Fixing the System: An Analysis of Alternative Proposals for the Reform of International Tax

## ABSTRACT

We evaluate proposals for the reform of the U.S. system of taxing cross-border income including dividend exemption, full current inclusion, and a Japanese type version of dividend exemption with an effective tax rate test subject to an exception for an active business. In addition we consider a special version of a country by country minimum tax with dividend exemption, no active business exception, but a current deduction against the minimum tax base for tangible investment in the location. To compare these schemes with current law, we reevaluate the efficiency cost of the dividend repatriation tax using evidence from the response to the 2005 repatriation tax holiday. We find that the burden of avoiding repatriations is higher than found in previous estimates, particularly for high tech profitable foreign businesses, and rises as deferrals accumulate. We simulate the effect of the various alternatives on effective tax rates for investment in high and low tax countries with inclusion of the importance of parent developed intangibles and their role in shifting income from the United States. To highlight the effect of check-the-box, the simulations are provided for effective tax rates both before and after its introduction.

Our analysis demonstrates that it is possible to make improvements to the system of taxing cross-border income across many dimensions including the lockout effect, income shifting, the choice of location and complexity. The goals are not necessarily in conflict. Compared to the other schemes, we find that the minimum tax with expensing for real investment has many advantages with respect to these margins. The minimum tax offsets (at least in part) the increased incentives for income shifting under pure dividend exemption and is better than full inclusion in tailoring companies' effective tax rates to their competitive position abroad. No U.S. tax burden will fall on companies that earn just a normal return abroad. The minimum tax is basically a tax on large excess returns in low tax locations, cases in which the company probably has less intense foreign competition. The investment will still be made. Unlike the Japanese type dividend exemption alternative considered, there is no cliff in which the income is subject to the full home country rate if it fails the minimum effective tax rate and active business test. Under the minimum tax with no cliff the company has more of an incentive to lower foreign taxes and will often prefer paying the U.S. minimum tax to paying a higher foreign tax. Finally, the minimum tax with expensing seems a better policy choice than the repeal of check-the-box. It is more effective in discouraging income shifting. In summary, the minimum tax with expensing combines the advantages of the extreme alternatives, dividend exemption and full inclusion, and reduces their shortcomings.

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## Introduction

Several recent developments necessitate taking another look at alternative reforms of the U.S. system for taxing cross-border income. Discontent with the U.S. worldwide system for taxing the international income of U.S. corporations has focused policy makers on possible reforms. Both Senator Mike Enzi and House Ways and Means Chairman Dave Camp have released draft proposals of dividend exemption systems. Provisions that would tighten international tax laws have been part of every Obama Administration budget and the President's Economic Recovery Advisory Board (PERAB) has issued a report that includes an extensive discussion of international tax reform options (PERAB 2010).[1]

There is also additional evidence regarding the costs and benefits of the current U.S. system. One of the most important features of the current system in evaluating the incentives for foreign investment and the location of income is the burden of the repatriation tax on dividends. This burden includes both the U.S. residual tax on actual dividend repatriations, which due to effective tax planning by corporations tends to be small, and more importantly the efficiency cost or 'implicit' tax attributable to the avoidance of the repatriation tax. The unexpectedly large repatriations under the 2005 tax holiday provide an opportunity for reevaluating this implicit burden. Evidence from the tax holiday suggests that this implicit cost of additional deferrals is larger than is reflected in previous estimates and increases as the pool of accumulations grows.

Furthermore both the international environment and U.S. tax laws have changed. The two other major industrial countries with worldwide systems, Japan and the United Kingdom, have converted to dividend exemption. In addition, both statutory and effective tax rates around the world have continued to decline relative to U.S. rates, sharpening the 'competitiveness' issue.

[1] On February 22, 2012, the White House and the Department of the Treasury released a joint report outlining a framework for business tax reform that includes, among other proposals, elimination of a number of business tax expenditures, a reduction in the corporate statutory tax rate to 28 percent, and a new minimum tax on foreign earnings within the current worldwide system. This paper does not analyze this specific proposal.

The decline in foreign rates can also be expected to reduce the amount of excess foreign tax credits under the current system with important implications for company behavior.

The reduction in the frequency of excess credit positions will gain added impetus by the enactment in 2010 of the new foreign tax credit 'splitter' rules. In the past, multinational corporations (MNCs) have been able to use various devices such a hybrid entities and foreign partnerships to separate the foreign tax from the income that gave rise to it. They have thereby been able to magnify the amount of foreign tax credits relative to the income being repatriated. The new Section 909 in the Internal Revenue Code limits this type of credit manipulation. The resulting decline in excess foreign tax credits will substantially revise the comparison of the current system versus its alternatives.

Taking these developments into account, we evaluate proposals for reform of the U.S. tax system for taxing cross-border income including dividend exemption, full inclusion, and a Japanese type version of dividend exemption with an effective tax rate test with an exception for active business. We also consider two versions of a dividend exemption system with a country by country minimum tax and no active business exception. In one version a current deduction against the minimum tax for real investment in the location is allowed. Given the importance of the check-the-box rules to tax planning, we also include their repeal as one of the options for reform within current law.

To compare dividend exemption proposals with current law we reevaluate the burden of the current repatriation tax taking the response to the 2005 tax holiday into account. The implicit cost of avoiding repatriation turns out to be higher than found in previous estimates and increases as deferrals accumulate abroad. This has significant implications for our analysis.

We evaluate the proposals using a number of criteria. We examine the impact of the proposals on the lockout effect, changes in the incentives to shift income, the distortion of investment incentives and whether the reform is consistent with a more efficient allocation of worldwide capital, revenue, complexity, tax planning incentives beyond income shifting, and

incentives to expatriate. We simulate effective tax rates for low and high tax investments abroad to show how the various alternatives work and illustrate their consequences. To highlight how the various systems affect income shifting alternatives we consider investments that produce high tech goods using U.S. developed intangible assets.

The analysis suggests that the minimum tax with expensing for real investment has many advantages compared to the other schemes. The minimum tax offsets (at least in part) the increased incentives for income shifting under a pure dividend exemption system and is better than full inclusion in tailoring companies' effective tax rates to their competitive position abroad. No U.S. tax burden will fall on companies that earn just a normal return abroad appropriately preserving capital import neutrality (CIN). The minimum tax is basically a tax on large excess returns in low tax locations, cases in which the company probably has less intense foreign competition appropriately moving the system towards capital export neutrality (CEN) for these companies. Unlike the Japanese type dividend exemption alternative considered, there is no cliff in which the income is subject to the full home country rate if it fails the minimum tax and active business test. The company has more of an incentive to lower foreign taxes and will often prefer paying the U.S. minimum tax to paying a higher foreign tax. Finally, the minimum tax with expensing seems more advantageous than the repeal of check-the-box. It is more effective in discouraging income shifting. In summary, the minimum tax with expensing combines the advantages of the extreme alternatives, dividend exemption and full inclusion, and reduces their shortcomings.

The paper is organized as follows. We start by briefly discussing problems with the traditional criteria used to evaluate international tax proposals. We stress that the optimal tax on foreign income is a 'Second Best' problem and that alternatives should be judged based on whether they move the system towards the 'Second Best' answer. We then highlight problems with the current U.S. worldwide with deferral system and describe both the proposals we analyze and criteria we use to judge the alternative proposals. To evaluate reforms against current law it is

necessary to reevaluate the efficiency cost of accumulating deferrals. After presenting new estimates of the implicit burden of deferrals, we present the results of our effective tax rate simulations. This analysis is followed by a discussion of the revenue consequences of the current system and the various alternatives, incentives to expatriate under the various alternatives, and how the reform alternatives differ in terms of complexity. Before concluding we consider three additional reform alternatives: an overall rather than a per-country minimum tax, a move to formulary apportionment, and changing the balance between corporate and personal taxation.

**Alternative Criteria for Foreign Investment**

There is an extensive literature on the alternative standards that should guide the process of evaluating international tax reform proposals including Capital Export Neutrality (CEN), Capital Import Neutrality (CIN), and, more recently, Capital Ownership Neutrality (CON). However, as indicated in Grubert and Altshuler (2008), the usual evaluation of reforms relative to these norms is not very helpful because each proposed standard is based on very special assumptions. Furthermore, none of the standards addresses the most important issues in designing an international tax system such as the taxation of excess returns and royalties, income shifting, and the allocation of parent expenses to foreign income.

The optimal tax on foreign income is in general a 'Second Best' problem because there are existing foreign and domestic taxes.[2] The answer depends on which investments a potential foreign investment competes with, those in high tax jurisdictions abroad and in the United States, for example, or those in low tax locations. It is difficult to have a single rule that will fit all cases. Some investments are highly mobile, serving a worldwide market, with many possible alternative locations. Others are more closely tied to a given location because of the importance of being close to customers or to a source of raw materials. Some investments compete with U.S. production while others compete with low tax production abroad. None of the standards will be

[2] See Grubert and Mutti (1995) for a discussion of the general second best rule.

appropriate in all cases and it is not feasible to design a policy with different rules for different cases.

It may, however, be possible to design relatively simple rules that move policy towards the Second Best answer. One of the alternatives we evaluate is a minimum tax on foreign income, on a per country basis, with a current deduction for real investment against the U.S. minimum taxable base in the location. The minimum tax therefore applies only to excess returns in the foreign location. Investments with large excess returns probably do not have very close foreign competitors so imposing a minimum tax is not likely to put them at a competitive disadvantage abroad. Also, some of the tax would be on rents and thus be non-distortionary (ignoring any possible expatriation responses). The investment would take place even with the minimum tax, which just acts to reduce the tax considerations in the choice of where it is located.

On the other hand, companies that make basic real investments that do not earn much more than a 'normal' return probably have more intense foreign competition. Imposing a U.S. tax could put them at a competitive disadvantage even though they are more efficient than their rivals. The minimum tax with expensing therefore has the virtue of moving the system towards CEN for foreign investments with large excess returns and little competition, and towards CIN for more basic real investments that compete with close rivals in foreign locations for normal returns.

Designing a set of international tax rules is mainly a question of how excess returns attributable to U.S. developed intellectual property are taxed. If the investment simply involves standard real capital like an aircraft or a ship, they can be leased from foreign investors since the rental price will not reflect any U.S. tax. A company can therefore already exempt the normal return from U.S. tax by leasing the capital.

In discussing criteria for foreign investment, one issue is whether worldwide or national efficiency is the objective. As we note below, the minimum tax with expensing seems to improve both so there is no ambiguity as to which proposal is superior. The choice of investment location

is less distorted and U.S. revenue increases at the same time. Besides, the extent to which the two goals conflict is never very clear because relationships between governments involves a complex series of transactions. Policy changes cannot be considered in isolation. Foreign governments may have ways of compensating the home government for any policy changes that improve their welfare.

**Problems with the Current Worldwide System**

The present system raises little revenue, is complicated, creates incentives for aggressive income shifting, and interferes with companies' efficient use of capital as they try to avoid the dividend repatriation tax. It is hard to argue that the system is based on any coherent concept of how an optimal system should be designed. Consider the following problems:

1. Income shifting. The evidence on income shifting under the current U.S. system is extensive, and it seems to be getting worse, in part because of the generous tax planning opportunities opened up by the check-the-box rules in 1997 (Grubert 2012). As evident in the effective tax rate simulations presented below, this aggressive tax planning distorts investment decisions by magnifying the benefits of low tax locations.

2. The 'lockout' effect attributable to both actual and 'implicit' tax costs. U.S. companies use various techniques for avoiding the repatriation tax, such as having the U.S. parent borrow using accumulated financial assets abroad as implicit collateral (Altshuler and Grubert 2002). But these repatriation avoidance schemes come at a cost, such as a ballooning balance sheet that raises the company's cost of capital. The avoidance of the repatriation tax may also induce U.S. companies to acquire foreign companies in part because of the cheap source of locked out capital available (Microsoft-Skype, Cisco-NDS).

3. Complexity. The current system requires extensive calculations and adjustments involving foreign tax credits, allocated expenses, etc.

4. Competitiveness. While the current system provides many advantages to a low tax foreign location, there may be cases where the potential repatriation tax and other rules

discourage real investments that are consistent with an efficient worldwide allocation of capital. This may be the case when U.S. companies may not expect to earn much more than the normal cost of capital. Any new system should not prejudice productive real investments abroad.

*The main question in this paper is whether improvements can be made in all of these areas or if the goals are in conflict.* Must eliminating the lockout of foreign earnings exacerbate incentives for income shifting? Can income shifting be limited without an unnecessary burden on productive foreign investment?

**Proposals to be Analyzed**

1. The current worldwide system but at a 30 percent corporate rate. There seems to be a growing consensus that the United States should reduce its corporate statutory rate in response to the dramatic and continuing decline in corporate statutory rates abroad. Accordingly it seems appropriate to consider the current system with a lower rate.

2. Full inclusion with a 30 percent corporate rate in which the worldwide system is retained and the deferral privilege for active business income is repealed. This can be done in two ways. One is the 'Branch Method' which treats each subsidiary as a branch of the parent. Losses in some Controlled Foreign Corporations (CFCs) can therefore offset positive income elsewhere including in the parent. An alternative is the 'Subpart F Method' in which only positive income is included in the worldwide base.

3. Dividend exemption. Dividends derived from active business income can be repatriated free from U.S. tax. Royalties and other payments deductible abroad, and export sales income are fully taxed. We consider a system in which there are no allocations of parent overhead expenses to exempt foreign income. Capital gains from the sale of an active foreign asset would be exempt on the grounds that the price is based on future dividends. We assume that passive income and other income now taxed currently under subpart F would continue to be subject to current tax.

4. Dividend exemption with a version of the Japanese effective tax rate test. This is one of the anti-base-erosion alternatives in Chairman Camp's dividend exemption proposal (Ways and Means 2011). The effective tax rate in a country has to be above a certain minimum rate, 20 percent in the Japanese plan and 15 in the dividend exemption option we consider. If the country effective tax rate is below the threshold the income is currently included in U.S. taxable income. But the subsidiary's income can escape inclusion if it passes an active business test. As a result, the taxation of the subsidiary's income faces a cliff if it doesn't pass the active business test. If the effective foreign tax rate is below the threshold, the income faces the full home country rate. Companies therefore will not shift income to a pure tax haven as they do now with check-the-box planning.

5.a. A country by country minimum tax of 15 percent on active income with a credit for the effective foreign tax rate up to the 15 percent threshold. As in plan 4, effective tax rates are computed for income in each jurisdiction, so the income and tax in disregarded entities under check-the-box are placed in the location in which they are taxed and not consolidated with its CFC owner. The country tax base is Earnings and Profits (E&P) less intercompany dividends because that income has already been taxed in other jurisdictions.[3] It does include payments deductible elsewhere such as royalties and interest. The effective tax rate is the ratio of foreign taxes paid to this net E&P income base.[4] Dividends both from countries subject to the minimum tax and those above the minimum are fully exempt. There is no active business exception to the minimum tax and no allocations of parent overhead expense to foreign income. As under dividend exemption, royalties, interest and export sales income are fully taxed at the U.S. rate.[5]

[3] Earnings and Profits is defined in the Internal Revenue Code and regulations and is close to book or economic income. It is not local taxable income.

[4] The precise definition of E&P is net of foreign taxes paid, so foreign taxes are added to the denominator in the effective tax ratio to get pre-tax income. Similarly, foreign taxes are added to E&P to construct the taxable base.

[5] It is not quite correct to characterize the minimum tax as the equivalent of eliminating deferral but taxing the income at a lower rate. As in any dividend exemption scheme, royalties and interest are fully taxable and there is no flow over of excess credits to shield them.

Capital gains on the sale of an operating foreign asset are taxed at a 15 percent rate net of a credit for foreign taxes.

5.b. The company can deduct real investment in the country from the minimum tax base. Therefore there is no U.S. tax on the company's normal return abroad, the rate with which it discounts cash flows from real investments. Only the excess return is taxed at the U.S. rate and even then only in part because there is still some incentive for income shifting from the United States. In this option, the Earnings and Profits (E&P) of the foreign entity in a location would first be calculated in the normal way and also its effective tax rate based on that E&P. If the effective tax rate is below 15 percent, minimum tax would be due but the new investment could be deducted from the tentative taxable base. In future years the process would be repeated for the investment except now the taxable base would be increased by normal E&P depreciation to recapture the initial expensing.

6. Repeal of check-the-box within current law. Under repeal, most hybrids would be unwound because firms would prefer to pay the lower foreign tax rather than the U.S. tax that would be due under subpart F. The result would be a return to pre-1997 income shifting, and would in part address the problem of "stateless income" that has been referenced in the literature (see Kleinbard 2011).

**The Operation of the Minimum Tax**

As indicated above, the minimum tax is imposed on a country by country basis, not a CFC by CFC basis. If the company uses check-the-box to pay interest and royalties from one entity in the consolidated CFC to another, the interest and royalties are deductible from the payor and are assigned to the country in which they are subject to tax. Thus, for example, an entity incorporated in Ireland which is resident in Bermuda under the Irish place of management rule has its income assigned to Bermuda. Wherever the foreign income is, it bears a (U.S. plus

foreign) tax of at least 15 percent. Companies could elect to consolidate the income and tax of all of their entities within a given location.[6]

In calculating the effective tax rate in any location, using a single year could lead to erratic perturbations over time because of the timing of deductions and credits, losses, etc. We therefore propose using a five year average of foreign taxes paid in relation to E&P. Taxes and E&P for the current and past five years would be pooled for the purpose of the ratio calculation. Then to calculate the tentative U.S. tax liability in the current tax year the excess of 15 percent above the average foreign tax rate is multiplied by the five year average of E&P. That is, the five year average effective tax rate and the income it applies to should be based on the same pool of income. Otherwise, there would be opportunities for manipulating the timing of income and deductions to reduce the U.S. tax.

In the expensing variation, real investment can be deducted from the taxable E&P base. *But the expensing does not change the relevant average foreign effective tax rate for the purpose of calculating the stable residual U.S. tax rate.* The foreign effective tax rate, which determines the residual U.S. tax rate, is unaffected by the expensing.

Smoothing annual variations in foreign effective tax rates reduces the possibility that a given subsidiary will move above and below the 15 percent threshold over time. Another important reason is that it helps to achieve the exemption of the normal return in the expensing option because it increases the likelihood that the tax rate that applies to the deduction is the same as the tax rate that applies to the subsequent income.

The expensing under the minimum tax is intended to make the *forward looking U.S.* ETR on the normal return to investment zero while *the forward looking* ETR on the excess return bears a total tax, including both the foreign and U.S. components, of 15 percentage points. In the

[6] Companies are now required to attach a Form 8858 for each of the disregarded entities (DREs) owned by the CFC for which the Form 5471 is being filed. The Form 8858 gives the DRE's Earnings and Profits, the country under whose laws it is organized, and the country in which its principal business activity is conducted.

smoothing of effective tax rates and income that we propose, the deduction for investment is always for *current* year investment, not a five-year average, in order to maintain the zero *forward looking* U.S. effective tax rate on the normal return. A delay in the deduction through averaging would fail to accomplish this objective.

Consider the case of a subsidiary in a country with a 5 percent effective tax rate. The U.S. tax is therefore (.15-.05) or 10 percent of the taxable base. The subsidiary's current pre-tax E&P is 200 per year. The tentative U.S. tax before expensing would therefore be (.15-.05)*200=20. It considers an investment of 100 in the current year. This would be deductible from the U.S. taxable base and the current tax would therefore become (.15-.05)*(200-100)=10.

The company expects to earn 30 each year on the investment but the normal return, its cost of capital, is only 10 or 10 percent. Its annual excess return is therefore 20. The present discounted value of the excess return is 20/.1 =200. The present value of the U.S. tax on the return from the investment is (30*.1)/.1 minus the 10 of tax that was saved from the current expensing, i.e., 30-10=20. The total effective tax rate on the expected excess return is 15 percent, the 10 percent of U.S. tax plus the 5 percent of foreign tax.[7] If the expected return had been only 10 percent, the normal level, the expected U.S. tax rate on the investment would be zero. Of course the foreign 5 percent tax would remain.[8]

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[7] In fact, the marginal foreign tax rate on the excess return may not be exactly equal to the effective tax rate. The relevant statutory rate which can be different from the effective tax rate may apply. But the company's own effective rate, the ratio of actual taxes paid to economic income, is the best feasible approximation. The relevant statutory rate may be virtually impossible to determine because of tax holidays, patent boxes, state and regional differences, negotiated rates, etc.

[8] It is incorrect to measure the *expected* excess return purely from the company's current income and investment. For example it is incorrect to say that the excess return is 200-100=100 and that it should bear a tax of 15 percent. That would imply a U.S. tax in the current period of 5, not 10, because the foreign government has already collected 10 on the base of 200. The company would therefore save 15 of U.S. tax from the 100 investment and the ETR on its expected excess return would be less than 15 percent. In effect, this calculation would allow expensing at 15 percent rather than at the U.S. residual tax of 10 percent. It would offset the foreign government's 5 percent tax on the normal return by giving the company the extra benefit of 5. The objective of the proposal is to make the *U.S. tax rate* on the normal return zero, not to offset the foreign tax to make it zero as well.

**The One-Time Tax when Dividends are Exempt**

We assume there would be a one-time tax on the stock of pre-effective date untaxed deferrals in all the proposals in which dividends are exempt. Under the minimum tax with the expensing option, the one-time tax on pre-effective date untaxed deferrals takes a consistent form. Instead of applying to all untaxed deferred income, tangible capital can be deducted from total accumulated deferrals for the purposes of the tax. Only the 'trapped cash' that gets the greatest benefits from the new regime is taxed.[9]

**Acquisitions under the Expensing Version of the Minimum Tax**

A tax system should not distinguish between the treatment of a Greenfield investment and an acquisition of a similar operating asset. Investing in a plant should not have a tax treatment different from acquiring a company that owns a similar plant. Therefore some allowance should be given for the assets obtained by acquisition. An annual deduction against the minimum tax base equal to the 'normal' return on the market value of tangible assets acquired would be appropriate. Indeed, it seems appropriate to include all active operating assets acquired including intangible assets in the applicable base for the purposes of the deduction.[10] (In the case of the Greenfield investment, most of the intangible investments like start-up costs and market development are expensed.) The main objective of the minimum tax is to tax the excess return attributable to intangible assets developed by the parent, not the normal return on assets acquired.[11]

Taxing the excess return would not put U.S. companies at a competitive disadvantage in making foreign investments and acquisitions. They will still make the investments if they are more efficient than their rivals. If the intangible that is the source of the excess return is mobile,

[9] An alternative with the same goal would be to simply tax the entity's portfolio investments to the extent that they are less than total deferrals. They are the assets that yield income in the passive basket.
[10] An annual allowance rather than an immediate deduction for the entire acquisition price is suggested to avoid large variations in taxable income over time. However, it does require measuring the normal return so a system of immediate expensing with carry-forwards might be considered.
[11] Whether the asset base should be depreciated over time might arise. But the normal return being imputed is a net of depreciation return so depreciating the assets is not appropriate.

such as a patent used to produce a good sold on the worldwide market, the tax may just change where the investment is made. The choice of location will be less influenced by tax considerations.

**Debt and the Minimum Tax with Expensing**

Any dividend exemption system raises the issue of parent overhead deductions like interest and whether there should be allocations to exempt income. If there is a denial of parent interest deductions in the case of the minimum tax, the allocations are presumably based on worldwide fungibilty. Furthermore, since the income below the 15 percent threshold is subject to U.S. tax, any interest allocated abroad should receive a deduction at the rate at which the income would be taxed. For example, in a country with a 5 percent tax rate, the U.S. tax would be 10 percent of income and the allocated interest should be deductible at that rate. A company could of course avail itself of self- help by shifting debt abroad and getting a combined deduction of at least 15 percent.

The question is how much impact this allocation would have in low tax countries compared to the impact of the minimum tax and its effect on income shifting. Consider a hypothetical case. Assume that 25 percent of the investment in a low tax country is in the form of parent debt that gets allocated. The company engages in self –help and obtains a deduction at 15 percent. The tax differential between the deduction abroad and the deduction at home is therefore 15 percent. If the interest rate is equal to the normal pre-tax rate of return on the entire investment, the allocation raises the effective tax rate on the investment by 3.75 percentage points. Even though this is likely to be an overestimate because of the expansive assumptions, it is modest compared to the impact of the minimum tax on the effective tax rate in low tax countries revealed in the simulations in Table 1. For example the minimum tax raises the effective tax rate on a high tech investment in a country with a 5 percent tax rate by more than 25 percentage points. The reason for the discrepancy in effect is that the allocated debt is based only

on the operation's capital while the minimum tax applies to the entire base of income including the large amount shifted from the parent.

In the case of acquisitions, the annual allowance for the value of the acquired assets is only applied to the equity invested by the parent. If some of the acquisition debt is on the parent's books, it should be allocated to the new acquisition.

**Criteria for Judging the Alternative Schemes**

The question we are interested in evaluating is which of the proposals gets closest to fulfilling the goals of efficiency and simplicity. We take a broad view of efficiency to include the losses from income shifting attributable to tax planning costs and the distortions in investment incentives. We consider the issues listed below in our analysis of the desirability of the alternative schemes:

1. The lockout effect. All of the proposals eliminate the actual and implicit burden of the dividend repatriation tax. Because of the large implicit burden from large growing accumulations, this is a source of a substantial efficiency gain.

2. Changes in the incentives to shift income. These incentives disappear completely under full inclusion except for the companies that remain in excess credit. On the other hand, they expand under dividend exemption because of the elimination of the repatriation tax. The question will be whether the minimum tax is sufficient to reduce shifting incentives compared to the current system despite the elimination of the lockout burden. How close will the effective tax rate in a low tax location get to the undistorted (by income shifting) local rate?

3. Is the pattern of the changes in effective tax rates consistent with a more efficient worldwide allocation of capital? This means less distorted investment incentives due to income shifting opportunities but also not imposing burdensome U.S. tax when the company faces intense competition in foreign locations.

4. Revenue. Although we generally adopt the worldwide efficiency criterion, for the same worldwide revenue we would prefer it be paid to the U.S. Treasury rather than go into foreign

coffers. Which country gets the revenue depends on the plan's incentives to lower foreign tax. Under full inclusion, the company has no incentive to lower foreign taxes unless it has excess foreign tax credits. In contrast, the company has the incentive to lower any foreign tax under dividend exemption. Under the minimum tax, it has the incentive to lower any foreign tax above a 15 percent rate. Under the Japanese style dividend exemption cliff, companies have an incentive to be above the 15 percent threshold as long as it is less than the home country full inclusion rate.

5. Matching benefits and costs. For example, are the companies that get a large benefit from the freeing of their cash from the lockout effect the ones who have to pay additional tax?

6. Complexity. This includes credit planning and repatriation tax avoidance, expense allocations to foreign income, active business tests, effective foreign tax rate calculations, etc.

7. Incentives for additional tax planning such as switching from taxable royalties to exempt equity under dividend exemption.

8. Changes in the incentives to expatriate through inversions or mergers with foreign companies. Any increase in the U.S. tax on foreign income would tend to increase the benefits of expatriation but this may be offset somewhat by elimination of the lockout effect and reduced complexity.

**The Efficiency Cost of Accumulating Deferrals**

The efficiency cost to companies of avoiding the repatriation tax on dividends is important in evaluating any shift from the current worldwide system to a system in which U.S. tax liabilities do not depend on foreign dividends. These implicit costs attributable to ballooning parent debt and foregone domestic opportunities, etc., may be much larger than the explicit tax costs resulting from actual distributions. These costs may vary over the life cycle of a company's foreign operations so their impact on the effective tax rates on foreign investment will depend on whether the foreign operation is relatively new or relatively mature with a large stock of accumulated untaxed deferrals.

Estimates of the implicit burden of avoiding the residual U.S. tax on foreign dividends have tended to suggest a rather modest cost. Studies by Grubert and Mutti (2001) and Desai, Foley and Hines (2001) report efficiency costs of about one percent of foreign income. Both used a similar methodology, calculating the 'deadweight loss' attributable to the repatriation tax for a given investment based on CFC dividend repatriation equations. Grubert and Mutti concluded that in countries with effective tax rates below 10 percent the efficiency loss amounted to 1.7 percent of income. Adding the residual tax on actual dividends resulted in a combined cost of the repatriation tax of about 3 percent for a given investment. More recently, Grubert and Altshuler (2008) added a measure of potential accumulations of deferred income to a repatriation equation and concluded that the efficiency cost increases as the potential stock of deferrals increase. Indeed, the deterrent effect of the residual tax on repatriations appeared to lose its impact after 25 years of potential accumulations. But on the basis of the distribution of CFC ages they concluded that the average efficiency cost was still about one percent of 2002 income. They, however, did not project what the impact of continuing accumulations would be in the future.

Some studies of residence relocations and cross-border mergers and acquisitions have found a very large impact of the dividend repatriation tax (Huizinga and Voget 2009, Voget 2011, and Arulampalam, Devereux and Liberini 2012). These studies are based largely on non-U.S. companies headquartered in countries such as the United Kingdom that used to have worldwide systems. But these countries did not seem to have anything comparable to Section 956 which subjects subsidiary loans to and investments in to the United States to current taxation. Without this type of rule, the subsidiary could get cash to the parent free from tax, so it is surprising to find that the potential repatriation tax has much impact. Therefore, it is only for U.S. MNCs that one might expect to see a significant impact.

Here we look at the issue again. One reason to do so is the unexpectedly large response to the 2005 repatriation tax holiday in which companies were able to bring back dividends in excess of a historical base subject to a 5.25 percent tax net of a scaled down credit. The companies who

took advantage of the tax holiday paid an average of 3.6 percent on their repatriations (Redmiles 2008). They were willing to pay this amount to avoid actual or implicit future costs of at least this amount in terms of present value.

Appendix A goes into the details of this analysis. It develops a model that incorporates the assumption that avoiding the repatriation tax is not costless, and further that the marginal cost of additional deferrals rises as the stock of accumulations grows relative to current earnings. The empirical analysis of repatriations under the 2005 tax holiday confirms these hypotheses. The repatriation tax holiday evidence is then used to calibrate the marginal cost of repatriation tax avoidance and how it evolves as deferrals accumulate.

The Tobit regressions presented and discussed in Appendix A use 2004 data from U.S. Treasury tax files on companies' tax holiday repatriations and accumulated deferrals before the holiday to identify the factors that increase the marginal costs of avoiding the repatriation tax. Alternative specifications are used. One examines the relationship between the share of accumulated deferrals that were repatriated and the size of accumulations relative to current income. Another specification scales variables by current sales and related repatriations to the size of the stock of deferrals. In that specification the square of the stock of deferrals was also added as an independent variable to test for the possibility that an increasing stock motivated a disproportionate increase in repatriations. Other independent variables include parent R&D intensity, the company's foreign profit margin on sales, the amount of accumulated income previously taxed under the CFC rules, and the ratio of tangible capital to sales.

The results provide strong support for the hypothesis that the marginal cost of deferring income rises as the accumulated stock of deferrals increase.[12] The share of accumulated deferrals

[12] If the marginal cost of any year's additional deferrals were constant, contrary to our hypothesis, the estimate of the implicit cost of deferrals could be higher. This would imply that *any* repatriation under the tax holiday would have had an implicit cost above the holiday tax rate. Under the rising cost hypothesis, this is not the case because of the 'fresh start' benefits that arise from delaying the onset of future high costs. Immediately after the tax holiday repatriations the marginal cost of deferrals is low, below the tax holiday tax rate, but may rise significantly as time goes on.

repatriated in 2004 rose when the accumulated stock was higher in relation to current income. A higher stock of deferrals resulted in a disproportionate rise in tax holiday repatriations. In addition, parent R&D intensity and the profit margin abroad had a very significant impact in increasing tax holiday repatriations. The highly profitable, high tech subsidiaries seemed to have much fewer profitable opportunities for reinvesting their income.

The model (presented in Appendix A), which incorporates the rising marginal cost of deferral findings, is used to illustrate a company's repatriation decision under a permanent repatriation tax and under a temporary reduction in the repatriation tax. Under a permanent repatriation tax, the company begins to repatriate when the marginal cost of permanently retaining another dollar rises to equal the repatriation tax. In contrast, consider a temporary tax holiday tax rate after credits of 5 percent. The company will repatriate income beyond the point at which the marginal cost of further deferrals is equal to 5 percentage points. The reason is that an additional dollar of tax holiday repatriations saves not the constant cost of another dollar of permanent accumulations at that point but the rising marginal costs of greater accumulations as the deferral process begins again under the higher, normal repatriation tax. The tax holiday gives the subsidiary a 'fresh start' so that after the tax holiday it can begin deferring income with a low stock of deferrals and much lower marginal costs. It will repatriate a greater amount if the marginal cost of deferrals rises more steeply as the stock of deferrals grow.

We use the tax holiday evidence to calibrate the optimal conditions for repatriating under a tax holiday. The calibration indicates the extent to which the marginal cost of deferring income in a low tax profitable operation abroad rises as the stock of deferrals grows. As expected, the marginal cost of deferral is very low immediately after the tax holiday repatriations, but after 10 years, that is, in the year 2015, it rises to about 7 percentage points. This is consistent with BEA data which indicate that total retained earnings of nonbank affiliates abroad at the end of 2010 were almost double the amount at the end of 2004 even after the large tax holiday repatriations in 2005 and the severe recession. Thus in the effective tax rate simulations that follow, we are

conservative in assuming a cost of 5 percentage points for a mature highly profitable, R&D intensive company.[13]

**Effective Tax Rate Simulations**

Simulations are useful in showing how the various alternatives work and their consequences. Because of the evidence of the importance of income shifting, we emphasize how the alternative systems affect shifting incentives and how this translates into changes in effective tax rates.[14] The simulations therefore show the effect of different policies on several important behavioral margins. These include the investment location decision, the income shifting decision, and the repatriation planning decision. In addition, they can indicate the change in companies' incentives to expatriate in terms of any increase in tax liabilities net of reduced company costs for income shifting and repatriation planning.

In analyzing income shifting, it is important to distinguish between two types of shifting, that is, income shifting before the introduction of check-the-box and income shifting after check-the-box. Before the introduction of check-the-box, stripping income to a tax haven through intercompany payments like interest and royalties was limited by the subpart F rules. It was therefore necessary to invest in real operations in a low tax country in order to locate income there. Moreover, greater investment would facilitate greater income shifting because of a greater volume of intercompany transactions, for example. After the introduction of check-the-box this link between real investment and the location of income became much weaker (see Grubert 2012 and Kleinbard 2011). But the two types of income shifting can, in fact, reinforce each other. The use of a tax haven can make the tax rate on an operation in a low tax country even lower and can make a high tax country into a relatively low tax one.

The effective tax rates for various policy scenarios are presented on Table 1. We assume 3 countries: the United States, a high tax foreign country and a low tax country in which real

[13] It might be claimed that companies expected another repatriation tax holiday sometime in a few years. If so, they would have repatriated less, causing us to underestimate the marginal cost of additional deferrals.
[14] See, for example, Clausing (2009) for an estimate of U.S. corporate revenue lost to income shifting.

operations can be located. There is also a pure tax haven that income can be shifted to if check-the-box can be used. In each country depreciation for tax purposes is equal to economic depreciation. There is no third party debt. Therefore, in the absence of income shifting, the country effective tax rate is equal to the statutory rate. For the purpose of the simulations, the statutory tax rate is equal to 30 percent in the United States, 5 percent in the low tax country and 25 percent in the high tax country (and zero in the tax haven). The current law effective tax rates take the interest allocation rules into account. These rules bind only for firms with excess foreign tax credits.

We assume that the subsidiary in the low tax country produces a high tech good on the basis of a U.S. developed intangible asset. It therefore earns an excess return before paying royalties to the parent for the contribution of its intellectual property. The subsidiary's own contribution to the company's worldwide profits is just the normal return to its capital. The difference in tax rates creates an incentive to underpay the royalty to the U.S. parent but the underpayment is not costless. Tax planning takes resources and there is also the risk of penalties after audit. We assume that, in this pre-check-the-box type of tax planning, the cost of the income shifting or underpayment of royalties is a quadratic function of the amount shifted relative to the amount of real capital. The parameter in the function is calibrated to be consistent with observed profit margins in low tax countries under current law.

Income shifting alters the effective tax rate on new investment because added investment in a location increases the opportunity for additional income shifting. There are more transactions with other related parties and greater ability to use intangibles developed in the United States. In addition, if hybrid entities in tax havens can be used, investment incentives are the same as if the host countries for operating subsidiaries had lowered their tax rates.

Income shifting will have an effect on investment in both high and low tax countries. Additional investment in the high tax country benefits because some of its income can be shifted to the low tax country or to tax havens.

The subsidiary in the high tax foreign country produces a routine component and earns a normal return in the absence of profit shifting. It has an incentive to shift income to the low tax country but the ability to engage in that type of shifting is much more limited because it does not exploit valuable intangibles. The parameter in its quadratic cost of shifting function is therefore much greater.

In the simulations for current law, we assume, on the basis of the above analysis of the response to the repatriation tax holiday, that the burden of the repatriation tax on dividends from the low tax subsidiary is 5 percent of subsidiary pre-tax income if the parent is not in excess credit. This includes both the tax on actual dividends and the implicit cost of avoiding repatriations. We assume the burden on repatriations from the high-tax country is 1 percent of subsidiary pre-tax income. The company has some expectation of being in excess credit but we weight this frequency at only .2, lower than past experience, because of the new 'anti-splitter' rules restricting the extent to which foreign tax credits can be magnified relative to the income being repatriated. If the company is in excess credit, its subsidiary will pay greater royalties because they will now be free from U.S. tax.

Because of the distinction between pre and post check-the-box tax planning, effective tax rates for each scenario are presented for two cases. The first is for the situation before check-the-box when stripping income to tax havens was restricted by the subpart F rules. The second case is for the tax planning environment after check-the-box. After the implementation of check-the-box, income in both the high tax and low tax country could be shifted to a tax haven without triggering a current inclusion in U.S. taxable income. Because organizing hybrid entities under check-the box seems relatively simple, we assume that half of both high tax and low tax income is shifted to the tax haven.

The simulations consider low tax and high tax investments separately. Each investment is considered in turn so it gets the benefit of any additional shifting opportunities it creates. The formulas and further details on the simulations are provided in Appendix B.

Row one in Table 1 for current law shows that there is a substantial negative effective tax rate on investing in the low tax country, that is, a large tax subsidy. This is true even in the absence of check-the-box in spite of the substantial cost of the dividend repatriation tax we have assumed. The large tax subsidy is attributable to the combination of the benefits of underpaying the royalty by the low tax subsidiary and the exemption of the royalties that are paid if firms expect to be in excess credit. There is also a visible effect on the effective tax rate in the high tax subsidiary because of the opportunity for shifting income to the low tax subsidiary.

As shown in column two for current law, check-the-box has a large impact on effective tax rates. Effective tax rates on investment in both locations decline substantially. This is particularly apparent in the high tax location because of the opportunity for shifting formerly highly taxed income to a tax haven. In addition, less income from the high tax location is shifted to the low tax subsidiary because of the new opportunity for shifting to a tax haven. The gap between the effective tax rates in the two locations gets much narrower. For non-tax reasons the company may therefore decide to locate the high tech operation in the high tax location.

The second row shows that the elimination of the repatriation tax under dividend exemption pushes the effective tax rate in the low tax country even further into negative territory. Dropping the dividend repatriation tax outweighs the full taxation of royalties under dividend exemption. Because of the assumed quadratic cost of shifting function, and therefore a linear marginal cost of shifting function, the benefits of income shifting depend on the square of the tax differential. So the increase in the tax differential from 20 percentage points (30 percent – 10 percent) to 25 percentage points (30 percent – 5 percent) has a significant impact. With check-the-box, the effective tax rate is the equivalent of almost a 30 percent subsidy for investment in the low tax location. This comparison of current law and dividend exemption differs from earlier estimates (Altshuler and Grubert 2001) because the response to the 2005 repatriation tax holiday and the new anti-splitter legislation requires an adjustment to the burden of the repatriation tax and the frequency of excess credit positions.

The next row has the Japanese type dividend exemption system with a minimum tax of 15 percent in each location. Recall that there is an exception for active businesses so the LT and HT operations with real investment qualify. The tax haven does not qualify because it has no real operations. Neither the low tax subsidiary nor the high tax subsidiary would use the tax haven because of the cliff created by the Japanese type system. Any tax haven income would be taxed at the U.S. rate of 30 percent rather than 5 percent in the low tax country or 25 percent in the high tax country. Therefore this proposal just gets us back to dividend exemption without check-the-box, which is confirmed by the estimates.

The anti-base erosion alternative in the Camp bill that is modeled on the Japanese system seems much tougher than just requiring an active business. It appears that it is necessary to serve mainly local customers to avoid the full inclusion. If this causes the low tax subsidiary to fail the test, it creates the rather bizarre incentive to pay a tax greater than 15 percent to escape the cliff.

The next two rows in Table 1 show effective tax rates for the 15 percent minimum tax. In contrast to the previous Japanese type dividend exemption with a minimum tax, there is no exception for an active business. There is also no cliff so any income that is taxed at a tax rate below 15 percent only pays the amount to the United States that would raise the total tax rate to 15 percent. Dividends after any minimum tax has been paid are exempt. The first version does not have expensing against the U.S minimum tax base in the location and the last row includes the expensing variation.

The implications of this proposal are therefore much different from the Japanese type variation of dividend exemption. Investment in the low tax country gets no active business exception. Its income is always taxed at 15 percent whether it is shifted to the tax haven or not. On the other hand, the high tax country continues to benefit from having its income shifted to a tax haven. In the tax haven it pays only 15 percent compared to 25 percent in its home location. In contrast to the cliff case that also means the United States receives the 15 percent tax on the tax haven income.

This version of the minimum tax has a substantial effect on the effective tax rates. Note that in the no expensing case the effective tax rate in the low tax location rises to 5.6 percent, very close to the country's actual undistorted rate and much higher than the earlier version of the minimum tax with the active business exemption. It is not as high as 15 percent, the minimum tax rate, because the 15 percent differential from the U.S. rate still induces income shifting. Furthermore, the effective tax rate on investment in the high tax country is substantially below the country's nominal rate because there is still a tax benefit from using check-the-box to locate income in the tax haven.

In the low tax country, the expensing alternative that exempts the normal investment return results in a negative effective tax rate, but the effective tax subsidy is much smaller than under pure dividend exemption. Instead of bearing the 15 percent minimum tax, the normal return just pays the local 5 percent. In the high tax country, the opportunity to expense investment has no effect because any income there is not subject to the minimum tax.

There may be some concern that allowing expensing against the minimum tax on foreign income, but not on domestic income, will result in 'runaway plants'. The simulations show that the fear is unwarranted. Even with expensing the minimum tax results in a much higher effective tax in the low tax country than under current law.

Under the full inclusion system in the last row, all investment bears a 30 percent tax. There is no incentive to shift income but also no incentive to lower any foreign tax unless the company is in an excess credit position.

Finally, we can compare the repeal of check-the-box under current law with the introduction of the minimum tax while keeping check-the-box. As shown in column one for current law, tax planning before check-the-box still provided many opportunities for income shifting, as is evident from the significant negative effective tax rate in the low tax country. The effective tax rates under the minimum tax are much closer to the nominal low tax country rate.

Furthermore, under the minimum tax, the high tax country can still use the tax haven to lower its tax rates, and the United States will therefore collect the 15 percent on the tax haven income.

Table 2 presents the U.S. and foreign revenue resulting from the investments in the scenarios. The pattern is in general what the effective tax rates in Table 2 would lead one to expect. In each case, an investment of $100 is assumed with a normal return of $10.[15] In all cases except full inclusion the investment in the low tax country results in a revenue loss for the United States. The small amount received from actual repatriations under current law is far outweighed by the loss from the income shifted out. The loss to the United States widens after the introduction of check-the-box and even further under pure dividend exemption. But the loss is reduced significantly under the minimum tax both with and without expensing. Not surprisingly, foreign governments gain less than the United States loses. The gain is somewhat greater under the minimum tax because it is less advantageous to shift income from the high tax country to the low tax country.

As noted in the discussion of the effective tax rates, the Japanese version of dividend exemption just returns the system to dividend exemption before check-the-box. But the differing revenue impact of the Japanese version and the minimum tax from investment in the high tax country is notable. Because of the cliff in the Japanese type of scheme, the high tax subsidiary would not use check-the box to shift income to the tax haven because it would be taxed at 30 percent rather than 25 percent at home. Under the minimum tax, the subsidiary still gets a tax saving from using the tax haven, a tax rate of 15 percent rather than 25 percent. That means that the United States gets the 15 percent rather than having the income all taxed in the high tax foreign country.

[15] We are implicitly assuming that the capital for the investment would not have yielded any revenue if invested elsewhere. Estimates comparing these investments with an investment in the United States earning a normal return would have yielded similar results.

**Revenue: What does it depend on?**

While we do not present revenue estimates for the various proposals we do provide some information on how their 'static' revenue changes compare. In general the impact of the proposals on revenue will depend on the following elements:

1. The direct tax on foreign income.

2. The extent of cross-crediting. This form of tax planning will still occur under full inclusion so that, for example, royalties will be shielded if the company is in an excess credit position. High tax income in a location can also offset low tax income elsewhere. The frequency of excess credits may, however, decline under full inclusion because of the inclusion of low tax income in the tax base. There is no cross-crediting under the dividend exemption or minimum tax proposals.

3. Expense allocations. We assume they continue under full inclusion but not the other proposals.

4. The extent to which foreign losses can be deducted from domestic taxable income. Under full inclusion this depends on whether the 'Branch' or 'Subpart F' method described above is chosen. We assume that losses do not come home under the other proposals. However, as described above, subsidiary losses do enter into the computation of its effective tax rate for the purpose of the minimum tax.

5. The incentives to reduce foreign tax. As indicated above, under full inclusion, the company has no incentive to reduce the taxes it pays abroad as long as it is not in an excess credit position. Under the minimum tax, it has an incentive to reduce any tax above 15 percentage points. This means that in a country with a tax rate above 15 percent it has an incentive to continue to use a tax haven for the location of some income. The United States would tax the income in the tax haven at the minimum tax rate. Under the Japanese style cliff, the company has the same incentive to lower foreign taxes above 15 percent, but it has the somewhat odd incentive to pay more than 15 percent in low tax countries to escape the cliff.

6. Other behavioral responses. In some of the proposals, like the minimum tax and full inclusion, companies will have smaller incentives to shift income, particularly from the United States. Companies will pay the US Treasury instead of the foreign Treasury because the benefits of incurring the cost of shifting have been reduced. In contrast, the incentive for income shifting increases under pure dividend exemption because the benefit of the elimination of the actual and implicit dividend repatriation taxes is magnified.

Under both the minimum tax and dividend exemption, companies will have an incentive to switch from fully taxable royalties to equity income. That incentive, however, is smaller under the minimum tax because the equity income will bear at tax of at least 15 percent.

**Revenue from Foreign Source Income under Current Law**

In 2006, $32.0 billion of revenue was collected on all of corporate foreign source income. This amounted to less than 4 percent of all foreign income including deferred profits but before allocated parent expenses. But the amount raised from dividends represents only a very small portion of this revenue. Indeed, if dividends are removed from taxable foreign income total US tax revenue *increases* by about one billion. The dividends taxable on the margin after credits are more than offset by the credits originating with dividends that currently spill over to other income. The residual tax is obtained from royalties, passive income, export sales source income and branch income.

**How Much Would Companies Be Willing to Pay for Dividend Exemption?**

As we have seen, the evidence from the 2005 repatriation tax holiday suggests that the burden of the dividend repatriation tax is substantial, above 5 percent for the highly profitable, R&D intensive companies that account for much of foreign deferred income. This burden will increase as deferred income continues to accumulate. Total Earnings and Profits in 2008 were approximately $500 billion net of dividends received.

In determining what minimum tax rate companies would be willing to accept, it is important to put the tax holiday rate of 5.25 percent and the 15 percent minimum tax on a

comparable footing. Unlike the repatriation holiday with a proportionately scaled down credit, a full credit for the foreign tax would be given against the U.S. tax liability in a country under the minimum tax. In a country with a 5 percent effective tax rate, for example, the burden of the 15 percent minimum tax would be 10 percent. The burden of the 5.25 percent repatriation holiday rate would be 4.5 percent after scaled down credits (5.25 minus .15*5). If the local tax rate is higher, say 10 percent, the 3.75 tax under the holiday (5.25 minus .15*10) is not far from the 5 percent U.S. tax under the minimum tax. Of course, the minimum tax would not apply for effective foreign tax rates 15 percent or above, unlike the tax under the holiday.

**Some Revenue Comparisons**

We do not present full revenue estimates because they require precise knowledge of the various possible behavioral responses. But we can discuss the static no-behavioral change estimates in relative terms and speculate on the behavioral responses.[16] The tabulations from the Treasury tax files assume a 30 percent tax rate for the United States. They are based on corporate tax returns for 2006.

Because of the decline in average effective foreign tax rates that companies pay and the large amount of deferred income in low tax jurisdictions, the static revenue gain from repealing deferral is very large. The 15 percent minimum tax without expensing gains almost exactly half of the static full inclusion amount. About 55 percent of total E&P (net of dividends received from related parties) is in entities subject to the minimum tax, an indication that a large portion of MNC income bears a very low rate of tax. There is very little reduction in static revenue when expensing is added to the minimum tax proposal. It turns out that little real investment takes place in the locations affected by the minimum tax.

Finally, on a static basis pure dividend exemption is virtually revenue neutral. This is, however, without adjusting for the 'anti-splitters' legislation which would reduce excess foreign

[16] We are very grateful to Ralph Rector for these tabulations. For the minimum tax the tabulations required the imputation of tax to a CFC's disregarded entities under check-the-box.

tax credits that shield royalties under current law. That would increase the cost of converting to dividend exemption under which royalties are fully taxed.

Each of the options will induce large responses, but of different types and magnitude. Under full inclusion (the repeal of deferral) the company has no incentive to lower foreign taxes as long as it does not have excess credits. For example, it would get no benefit from organizing hybrid entities to strip income out of high tax jurisdictions. But it also gets no benefit from shifting income out of the United States so more income would be taxed in the United States without a foreign tax credit. On the other hand, under dividend exemption companies have the incentive to reduce any foreign tax because they have no value as credits. But the elimination of the repatriation tax under dividend exemption will increase income shifting from the United States because low tax foreign income is now worth more. In addition, companies will tend to switch from taxable royalties to exempt equity income to the extent this is possible.

The minimum tax falls somewhere between these two extremes in terms of behavioral responses. Companies have no incentive to lower foreign taxes in a location below a 15 percent rate but they will attempt to lower taxes above that threshold. Hybrid entities will still be used to shift high tax income to tax havens where the U.S. minimum tax rate of 15 percent applies. Because the minimum tax exempts dividends, there will be a tendency to switch from royalties to equity income, but the benefit is smaller than under dividend exemption because the tax differential is 15 percent rather than 30 percent. And the tendency to increase income shifting because of the elimination of the repatriation tax appears to be more than offset by the minimum tax. Indeed, the effective tax rate simulations suggest that shifting to low tax locations will be much smaller than under current law. In terms of investment location incentives, the effect of the minimum tax is smaller than under full inclusion. Behavioral responses to the minimum tax that reduce U.S. tax revenue therefore seem muted compared to either dividend exemption or full inclusion.

**An Overall Minimum Tax versus the Per-Country Minimum Tax**

A possible simplification is to impose the minimum tax at the level of all active foreign income rather than on a country by country basis. For example, how would a 15 percent minimum tax on all foreign income compare with a per country minimum tax at 10 percent?

The answer depends on how much foreign income is earned by companies with effective tax rates on foreign income below 15 percentage points. For those companies below the threshold, any new investment would have an effective tax rate the same as effective tax rates under the per-country system with a 15 percent rate. Any additional income is taxed at 15 percent.

But if a significant amount of income is above the 15 percent threshold, the overall system would distort investment compared to current law. Those companies above 15 percent could now increase tax haven income without confronting the problem of a U.S. repatriation tax. They would be comparable to taxpayers who are in excess credit under current law. A revealing comparison would be to estimate excess credits under current law at 30 percent versus 'excess credits' under the overall minimum tax at 15 percent.

Similarly, companies under the 15 percent overall threshold would have a newfound incentive to reduce their current U.S. tax liabilities by acquiring or investing in operations with effective tax rates above 15 percent. They have less pressure under current law because they can avoid current U.S. tax by deferring repatriations and they would only obtain excess credits from new operations with effective tax rates above the normal U.S. corporate rate. Companies below the threshold would also obtain no benefit from hybrid structures that shift foreign income to tax havens. They would not organize new ones and might unwind old ones, with revenue going to foreign governments at the expense of the United States.

The static estimate, based on 2006 data, of the revenue gained from a 15 percent overall minimum tax is about 75 percent of the revenue obtained from a 10 percent per country minimum tax. This suggests that: (a) companies above the 15 percent overall threshold have significant low

tax income, and (b) companies below the threshold have significant income with effective tax rates above 15 percent that lowers their U.S. tax liabilities.

It would of course be possible to address the problem of 'excess credits' under a global minimum by scaling down the credits, as in the 2005 repatriation tax holiday. For example, a 15 percent minimum tax, compared to a normal 30 percent corporate rate, with credits equal to 50 percent of taxes paid.

**Incentives to Expatriate**

Because proposals like the minimum tax will increase MNCs' tax liabilities, the possibility that this will cause some of them to expatriate is a concern.[17] The issue of expatriation has come back into focus by the recent decision by Aon, the major insurance broker, to move its tax residence to the United Kingdom. The company already has business operations in the United Kingdom so it believes the transaction will not be restricted by the anti-inversion provisions in Section 7874. In the prospectus for the reorganization, the company stated that it expected its worldwide tax rate to go down from 30 percent to 26 percent, which seems much more than could be explained by any tax on its dividend repatriations. It could be that it has trouble qualifying for exceptions to subpart F treatment of insurance income. (It apparently expects a loosening of the UK CFC rules. Aon has already been granted a two year exemption from the U.K. CFC rules.) We should note that the plan is for a stock transaction so it is apparently not governed by Section 367 on the transfers of intangible property from the United States. Any existing intangible assets will still reside with the U.S. entity. But shareholders in Aon will have to recognize a capital gain on the transaction.

It is useful to first consider why expatriation is harmful to the United States. Aon stated that it would move 20 key executives to London, so in this case the shift in headquarter services

[17] See Daniel Shaviro (2011) for a discussion of the electivity of corporate residence under current law and its implications for tax policy. Eric Allen and Susan Morse (2011) look at firms that conducted initial public offerings in the United States between 1997 and 2010 to determine the extent to which firms incorporate in tax havens. Their careful analysis suggests that few U.S. start-ups incorporated in tax havens over the period examined.

does not seem to be quantitatively very significant. It is similar to Halliburton's earlier (in 2007) shift of its headquarters to Dubai from Houston *without* changing its tax residence.

We might ask what makes an American company intrinsically an American company. It is presumably mainly because the intangible assets or 'know how' were developed in the United States. Under an income tax the contribution of the 'know how' should be taxed where it is developed like any other input. Getting the value of these intangibles outside the U.S. tax net may be a reason for expatriation although companies now do not seem to have any trouble migrating their intangibles.

Another normative reason for assigning residence is the source of the initial risk taking when the company is established. There are examples in recent IPOs of companies in which the 'know how' was developed in the United States but the venture capital financing came from abroad. That offers some justification for a foreign residence.

Companies may choose to expatriate because it puts them in a better position to strip income out of the United States using intercompany debt. Presumably that is due to the weaknesses in Section 163j, the object of which is to restrict interest stripping from the United States.[18] Apart from avoiding the tax on dividend repatriations, as apparently in the case of AON, a company may also wish to escape the strictures of the subpart F rules although these have been greatly weakened by check-the-box.

Companies that have a foreign tax residence but are really based in the United States seem to fall into a few specific industry categories including insurance, shipping, and offshore oil drilling. These are highly mobile operations. Shipping companies may have been motivated by the inclusion of shipping income in tainted subpart F income, but that has now been repealed. For highly mobile capital intensive industries, where the operating capital can easily be moved across borders, just the difference in the tax on the normal return on capital can be significant. In the

[18] Altshuler and Grubert (2010) suggested that a company's worldwide debt be allocated to various locations based on assets.

case of insurance, some of this tax induced distortion is at least in part offset by the insurance excise tax on premiums paid to foreign insurers.

Turning now to the alternative proposals, the large increase in U.S. tax burdens under full inclusion will increase incentives for expatriation. Dividend exemption will reduce them compared to current law. The minimum tax with expensing will tend to eliminate any incentive attributable to differences in the tax on the normal return to capital. Industries like oil drilling are highly capital intensive. On the other hand, the excess returns that are largely attributable to intangible assets *would* be taxed more heavily under the minimum tax. However, companies may be reluctant to go through the valuation problems involved in expatriating the intangibles. In any case, it is difficult to predict the net effect of the minimum tax on expatriation.

**Complexity under the Alternative Proposals**

1. Credit planning. Under the current system and full inclusion, that is, any worldwide system, foreign tax credits have to be calculated. Magnifying credits is an important planning strategy although it will be somewhat restricted by the new anti-splitter rules. Credit calculations for active income disappear for active income under the minimum tax and dividend exemption options. Foreign tax credits would still need to be calculated for passive income but that is a much smaller pool of income.

2. Expense allocations to foreign income. This is another important source of complexity in current law.[19] We assume allocations are not made under dividend exemption or any of the minimum tax options. (The issue is discussed above.)

3. The determination of what is an active business under the active business exception in the Japanese type version of dividend exemption. Determining what is an active finance exception to the current inclusion of financial income in U.S. taxable income has required elaborate rules. Interpreting the Japanese rules or the version in the Camp proposal is very

[19] For an excellent discussion of interest allocation rules and the complexity imposing these rules creates see Graetz and Oosterhuis (2001).

difficult. It is not clear whether anything that would pass as active in the current subpart F rule would fail. Furthermore, it is difficult to design a conceptually coherent rule based on the destination of subsidiary sales. Companies may choose a location as a base for worldwide sales for 'legitimate' non-tax reasons. Subjecting them to a U.S. tax may leave them at a competitive disadvantage.

The expensing in the minimum tax is in part a substitute for an active business test. If the company is making real investments in a location, its current U.S. tax liability is reduced and its normal return is exempt.

4. The determination of E&P by country and the computation of the average effective tax rate for the purposes of the minimum tax is the major complication in the proposal. As indicated above, we suggest that five years, including the current one, of tax and five years of pretax income be combined to compute the effective tax rate.

5. Potential subpart F simplification. Full inclusion would certainly make much of subpart F unnecessary. Subpart F rules would only be necessary to retain the active-passive income distinction for tax crediting purposes. Dividend exemption would render obsolete the Section 956 dividend provision requiring the current inclusion of CFC loans or investments in the parent. The current *de minimis* threshold for currently includable 'Foreign Base Company Income', which includes passive income, is the lesser of $1 million or 5 percent of the CFC's gross income. Because any foreign income would bear a tax of at least 15 percent under the minimum tax, that might justify raising the threshold.

6. The treatment of branch income. The dividend exemption plans would require new rules for branch income if it is also covered by the exemption. Instead of being inside the U.S. tax base under currently law, branches would now be outside the U.S tax base. But this would simply require branches to be taxed like CFCs. They would, for example, be required to pay an explicit royalty for the use of any U.S. developed intangibles. The dividend exemption schemes would

also necessitate rules restricting the use of hybrid instruments that convert payments deductible abroad into exempt equity at home.

**Formula Apportionment: Is it the Answer to Income Shifting?**

Formula apportionment is frequently seen as the solution to income shifting because under this system intercompany transactions play no role in the division of income between jurisdictions. (See for example Avi-Yonah and Clausing 2007.) In 2011, the European Commission proposed a Common Consolidated Corporate Tax Base, a version of Formula Apportionment (FA), for the members of the European Union. As indicated in Altshuler and Grubert (2010), FA suffers from many conceptual and practical problems and appears to have no advantage over the current, admittedly flawed, Separate Accounts (SA) system.

Most discussions of formula apportionment fail to specify the goals of a transfer pricing or income allocation regime within an integrated tax system. In terms of efficiency, it is to preserve neutrality in the choice between related and unrelated party transactions. Both FA and SA distort these choices but in different ways.

The basic problem with FA is the asymmetry between the items in the formula and the sources of income. The principal sources of income shifting are intangible assets that create large excess returns and the location of worldwide company debt. But these never get into the formula. Companies can therefore exploit this asymmetry to locate more income in low tax locations.

Under SA, an MNC with valuable intellectual property has an incentive to locate the high tech stage part of the production process in a low tax location to justify large profits there. FA also distorts the company's decision making in order to locate more of the excess return in the tax haven but along different margins. If the formula is origin based, like capital and payrolls, the company can shift any stage of production to the low tax country, even a very routine stage, because it is equally successful in attracting the excess return. Furthermore, in the high tax country, the company has an incentive to outsource all routine production while in the low tax country it has the incentive to bring all suppliers under the company umbrella to get their labor

and capital into the formula. Simulations in Altshuler and Grubert (2010) show that FA using a capital based formula has no advantages over the current system in terms of distorted decision making even though it is assumed that a substantial amount of resources are now wasted in tax planning under SA.

Labor and payrolls are particularly convenient for manipulating the formula to shift excess returns. Since wages are deductible from the pool of income to be apportioned, an additional worker hired in the tax haven whose wage just equals their marginal product contributes a bonus to the company. The wages get into the formula and attract more of the excess return. The company has an incentive to hire relatively unproductive workers in the low tax country.

Avi-Yonah and Clausing (2007) recommend exclusively sales based apportionment on the grounds that the destination of sales is least susceptible to manipulation. A single sales factor is used in many formulas for corporate tax apportionment at the state level in the United States. But these formulas also provide many opportunities for restructuring activities to get more income into low tax locations. A company can sell routine, labor intensive products in a low tax location. The company may also sell its products to an unrelated distributor in the tax haven. The final sales may be very difficult to trace. Tracing the final sales to consumers would be particularly difficult if the company produces a high tech component that is incorporated into a final good by the unrelated buyer in a low tax location and then sold in many markets. The tax advantages of having an unrelated party make the finished product also creates an incentive for the component company not to do so.

Another response would be for the company to do its own marketing and selling in low tax countries while using unrelated sellers in high tax countries. The wholesale prices would get in the formula for high country sales and retail prices for low tax country sales.

Some observers see sales based FA as an intermediate step to a destination basis consumption tax like a VAT. We cannot judge the likelihood of this happening but as outlined in

Altshuler and Grubert (2010) a sales based formula is very far from a destination basis consumption tax. It is not a consumption tax because investment goods are taxed like any other good and there is no deduction by the investing company. Furthermore, it applies only to corporate profits, not all of value added, which introduces trade distortions into an income tax.

One advantage of a VAT or other destination principle consumption tax is that the rebate on exports per dollar is the same as the VAT imposed on imports. As a result, there are no trade distortions, or distortions in the choice to invest abroad rather than at home. But the sales based formula is applied to a corporate income tax in which companies have greatly varying levels of taxable profits relative to sales. Differences in capital intensity could be one reason. There would therefore be a large variety of rebates on exports and taxes on imports, with possibly large trade distortions. For example, U.S. exporters may have very high profit margins on sales while foreign companies exporting to the United States may produce routine, labor intensive goods with very low profit margins. In that case, the formula would constitute a significant export subsidy because the tax applies only to the profit portion of value added, unlike a true consumption tax.[20] Furthermore there is the problem of a pure foreign exporter with no business in the United States and therefore out of the U.S. tax net.

**Consumers as the Source of All Value?**

Apart from sales based apportionment, there is the related view that corporate profits should be taxed at the locus of ultimate consumption. Willing consumers are what create value, it is claimed. The contribution of intangible assets like patents would therefore be taxed where the final good or service is consumed, not where the patent is developed or financed.[21] In addition to the trade distorting effects of a sales-based formula and the absence of any conceptual reason for

[20] The corporate income tax itself can distort comparative advantage because of differences in profit margins across domestic sectors, but the formula based on sales adds to the distortion because of differences in tax rates and factor endowments between countries.

[21] One common argument for this position is that the country of final consumption protects the intellectual property embodied in the good. The implication appears to be that the United States should tax imports under an income tax because the police prevent them from being stolen.

ignoring the creators of a good, this view confronts the problem of intermediate goods like components, machines and software. The difficulty of identifying the location of the ultimate consumer is particularly acute in the case of business software and capital equipment. They can contribute to the production of a variety of goods and services over a long period of time. This problem does not arise under a real consumption tax like a destination basis VAT because of the invoice-credit mechanism.

Neither 'taxing income where the goods are consumed' nor a sales based formula is consistent with what is actually taxed in a true consumption tax. In a consumption tax, the excess return earned on the basis of a valuable patent is taxed when the owners of the patent consume the proceeds in their country of residence. The final consumers of the goods produced with the patent are just taxed on the earnings they spend in their country of residence, the same tax they would pay if they spent their income on another good.

Furthermore, allocating expenses like R&D to the final consumption location is insufficient even apart from being complicated. First, what you observe are the winners in the R&D race who make large returns. It is impossible to include the R&D of all the losers in the allocation. Second, there are important increases in value that are not explained by an application of inputs. That is what an increase in U.S. total factor productivity means.

In summary, the taxation of business income based on the location of ultimate consumption is not a path to a destination basis consumption tax, it is a blind alley. It presents both conceptual and practical difficulties.

**The Balance of Corporate and Business Taxation**

The balance of corporate and business taxation has large implications for cross-border income and investment and therefore deserves attention as a reform alternative. Our analysis has assumed a 30 percent statutory tax rate because there is a widespread consensus that the corporate rate should fall. But there may be good reasons to go further, on a revenue neutral basis, and change the balance of corporate and personal taxation. Under that scheme, the corporate tax rate

would fall and personal taxes would rise, presumably in a progressive way. It would basically be a shift from source to residence taxation. We cannot make a systematic analysis of this option for the purposes of this paper but we attempt to identify the issues. For simplicity, we assume that the rise in personal taxation affects all income including labor income.

The behavioral margins and related distortions that are affected include:

1. The Harberger type corporate non-corporate distortion would be reduced. The corporate tax rate would be reduced and the tax rate on non-corporate business like partnerships would increase.

2. Entity choice between corporate and non-corporate form. Presumably each has advantages. But the corporate tax now seems to basically be a tax on being publicly traded. The balance tilted in favor of pass-throughs in the Tax Reform Act of 1986 and the share of business income earned by C corporations has, with occasional counter movements, tended to decline ever since. It is now below 50 percent. Furthermore, in the industries in which trade Master Limited Partnerships (MLPs) are allowed like gas pipelines, there seems to be a continuing switch to MLP form. This suggests a reduction in the tax disadvantage to C corporate form would lead to an efficiency gain because there would be a smaller penalty to being publicly traded.

3. Cross-border portfolio choice. An individual investor is interested in the after-corporate-tax return on capital. In most circumstances, foreign and domestic dividends and capital gains would be taxed at the same rate. Therefore the current high U.S. corporate rate shifts the balance in favor of foreign equities.

4. Income shifting. The narrowing of the gap in statutory tax rates between the United States and foreign locations will reduce incentives for income shifting.

5. Even apart from income shifting and its distorting effect on investment choices, a fall in the corporate rate would make the United States a more attractive destination for real investment and probably result in a more efficient worldwide allocation of capital.

6. The widening of the tax difference between retained corporate earnings and distributed corporate earnings. The dividend payout decision would become more distorted. (Repatriation decisions by foreign subsidiaries would become less distorted because of the decline in the U.S. corporate rate.)

7. The greater distortion of the labor-leisure choice, entrepreneurship decisions, and other effects of a higher personal tax.

The balance seems be to in favor of lowering corporate taxes and raising personal ones because only the last two items would become more distorted and because of globalization the others seem quantitatively more significant. But there are two further considerations before any judgment can be made. One is the effect on the distribution of income.[22] The question is: how much of the income of high income taxpayers was earlier in the corporate tax base? Dividends are the obvious example. Of course this would in part be offset by the increased tax on dividends at the personal level assuming they were taxed as ordinary income.

The other consideration is compliance. It may be easier to tax the income before being distributed to taxpayers. That could in part be dealt with by having the corporation being a withholding agent with a full credit if the individual reports it on the tax return filed with their resident country. But the compliance effects of a higher tax on labor income and small business income must also be considered.

**Conclusion**

We evaluate proposals for the reform of the U.S. system of taxing cross-border income including dividend exemption, full current inclusion, and a Japanese type version of dividend exemption with an effective tax rate test subject to an exception for an active business. In addition we consider a special version of a country by country minimum tax with dividend exemption, no active business exception, but a current deduction against the minimum tax base for real

[22] See Altshuler, Harris and Toder (2010) for an analysis of the distributional implications of a reform that lowers the corporate rate by using revenue from returning the top dividend and capital gains rates to the pre-1997 levels.

investment in the location. To compare these schemes with current law, we first reevaluate the burden of the dividend repatriation tax using evidence from the response to the 2005 repatriation tax holiday. We find that the implicit cost of avoiding repatriations is higher than found in previous estimates, particularly for high tech profitable foreign businesses, and rises as untaxed deferrals accumulate. We simulate the effect of the various alternatives on effective tax rates for investment in high and low tax countries, with inclusion of the importance of parent developed intangibles and their role in shifting income from the United States.

Our analysis demonstrates that it is possible to make improvements to the system of taxing cross-border income across many dimensions including the lockout effect, income shifting, the choice of location and complexity. The goals are not necessarily in conflict. Compared to the other schemes, we find that the minimum tax with expensing for real investment has many advantages with respect to these margins. The minimum tax offsets the increased incentives for income shifting under pure dividend exception and is better than full inclusion in tailoring companies' effective tax rates to their competitive position abroad. No U.S. tax burden will fall on companies that earn just a normal return abroad. The minimum tax is basically a tax on large excess returns in low tax locations, cases in which the company probably has less intense foreign competition. Unlike the Japanese type of dividend exemption alternative, there is no cliff in which the income is subject to the full home country rate if it fails the minimum tax and active business test. Under the minimum tax with no cliff the company has more of an incentive to lower foreign taxes and will often prefer paying the U.S. minimum tax to paying a higher foreign tax. Finally, the minimum tax with expensing seems more advantageous than the repeal of check-the-box. It is more effective in discouraging income shifting. In summary, the minimum tax with expensing combines the advantages of the extreme alternatives, dividend exemption and full inclusion, and reduces their shortcomings.

Our evaluation of alternatives to reform also considers other issues in international tax including incentives for expatriation, the benefits if any of formula apportionment as a solution to

the income shifting problem, and the effects of a possible shift in the balance of corporate and personal taxation on cross-border income and investment.

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## Appendix A

## The Cost of Avoiding the Repatriation Tax

Interpreting the tax holiday evidence depends on what model of the MNC's decisions is most consistent with the data. In the pure Hartman-Sinn 'New View' model, the foreign subsidiary has only two options for the use of any income, reinvesting in real assets or repatriating dividends to the parent. The MNC initially 'underinvests' to take advantage of deferral, first reinvesting all its income, and then repatriating all its income when it reaches the 'mature' stage. Even in this model, however, the subsidiary would take advantage of a tax holiday. For example, if the temporary tax holiday rate is zero the subsidiary would liquidate some of its real capital and return to the initial equity injection point. It would begin the Sinn process all over again to take advantage of deferral. The gain to the company is the cash repatriated less the present value of the former level of its repatriations until it resumes them when it becomes 'mature' again. If the tax holiday rate is positive, the company would repatriate less until the tax cost of repatriating another dollar is just equal to the net gain.

Weichenrieder (1996) and Altshuler and Grubert (2002) showed that the Hartman-Sinn model is based on very restrictive assumptions. For example, it ignores financial assets and debt. Weichenrieder (1996) introduced the possibility that the subsidiary could invest in passive assets rather than repatriating. Altshuler and Grubert (2002) use a more general model and describe various strategies that the subsidiary can use to permanently avoid the repatriation tax while still getting cash back to the parent. One simple strategy is for the subsidiary to invest in passive assets like bonds that are used as informal collateral by the parent for borrowing at home. If the borrowing and lending interest rates are the same, the current taxation of the passive interest under the CFC (subpart F) rules is just offset by the parent's deduction for the interest. There is no 'underinvestment' period, which Altshuler and Grubert (2002) find is consistent with the evidence.

Under the pure Altshuler and Grubert models, the company would never take advantage of any repatriation tax holiday if the tax holiday rate is positive. It can avoid repatriating forever while still getting the cash in the hands of the parent. But their assumption that repatriation avoidance strategies are

costless is unrealistic. For example, there may be a spread between borrowing and lending interest rates. More important, the debt on the company's balance sheet will balloon as time goes on, raising its borrowing costs. In another Altshuler-Grubert strategy, in which the low tax subsidiary invests in a high tax subsidiary that it uses as a vehicle for indirect tax free repatriations, the low tax subsidiary may eventually run out of eligible candidates to invest in.

The evidence in Grubert and Mutti (2001) and Desai, Foley and Hines (2001) that dividends do increase if the residual repatriation tax is lower suggests that repatriation tax avoidance strategies are not costless. (It is also inconsistent with the 'New View'.) Each of these papers uses annual cross-sectional data on subsidiary repatriations. The relationship they identify does not reflect temporary changes in a subsidiary's tax rate because the average country rate is used to construct the repatriation tax rate variable. Country average effective tax rates change only gradually over time and the country ranking of effective rates is very stable. The relationship between repatriation taxes and dividends is also not attributable to greater investment opportunities in the low tax subsidiaries because of the dominance of financial assets in low tax subsidiary balance sheets.

The average actual tax cost of repatriations for companies that repatriated during the holiday was about 3.6 percentage points (see Redmiles 2008). The fact that companies were willing to make very large tax holiday repatriations at this tax rate indicates that the repatriation tax was imposing substantial current or future costs. These could be in the form of the implicit costs of repatriation tax avoidance and the explicit costs of actual future repatriations. Presumably they were willing to pay 3.6 percentage points during the holiday to save at least that much in the present value of future costs they would have incurred. The question is the time pattern of these future costs.

The repatriation equations in Grubert and Altshuler (2008) suggest that the marginal costs of deferrals increase as the pool grows relative to current income. We use the tax holiday evidence to further test this hypothesis. We also develop a simple model that embodies the hypothesis and use it to interpret the evidence from the tax holiday. An explicit model is particularly important because the repatriation holiday was a temporary tax reduction. The response therefore depends on expectations about the future.

Unlike earlier analyses of repatriation behavior, the model we develop below looks at the company's long run plans rather than focusing only the repatriation choices in a single year.

We start with a model of behavior under a permanent repatriation tax. We assume a fixed, indivisible investment that yields an annual return after foreign tax of *Y* per period.[23] The repatriation tax if *Y* is repatriated is *TY*. The cost of avoiding repatriation in any year is a function of total accumulated retentions *A* up to that point, or *F(A)*, with *F'(A)* a rising function of *A*. The point at which the company stops retaining earnings and starts repatriating its income is time period *D*. The firm chooses *D* to minimize the present value of the cost of its repatriation strategy.

The present discounted value of these costs is:

$TC = \int_0^D F(tY)e^{-rt}dt + \int_D^\infty F(DY)e^{-rt}dt + \int_D^\infty YTe^{-rt}dt$, where *r* is the company's required rate of return. The first term is the cost of retentions until period *D*, the second term is the discounted cost of retaining the fixed accumulation *DY* after *D* and the third term is the present value of future repatriations taxes after they begin at *D*. Minimizing *TC* with respect to *D*, we get: $\int_D^\infty F'(DY)Ye^{-rt}dt = TYe^{-rD}$ which is equivalent to $\int_0^\infty F'(DY)e^{-rt}dt. = T.$ The left hand side is the marginal cost of further retentions of earnings at *D*. Beginning repatriations at period *D* with retentions *DY* is optimal when this marginal cost is equal to the repatriation tax *T*. *D* is the point at which the marginal cost of additional deferrals rises to equal the cost of actual repatriations. (It has not to be confused with the time at which repatriations begin in the Hartman-Sinn model.) This general pattern is consistent with the evidence in Grubert and Mutti (2001) who found that dividends were virtually zero in the first 10 years of a low-tax subsidiaries existence.

We can compare this optimal condition for deferrals under a permanent tax with the one that arises under a temporary tax holiday. We assume that under the tax holiday the rate applied to repatriations is temporarily reduced (but not to zero). The optimal date for beginning actual repatriations

[23] A fixed indivisible investment is convenient because it avoids the 'underinvestment' issue whenever there is an implicit or explicit repatriation tax, even if relatively small.

at the normal tax rate *T* is *D* Assume that the subsidiary has accumulated an amount *A* and is deciding how much to retain, *R*, after taking advantage of the tax holiday. The temporary holiday tax rate is *H* where 0<*H*<*T*. If the company keeps *R* after tax holiday repatriations, it will retain income for *D-R/Y* periods and then start repatriating again at the normal repatriation tax *T*. Total repatriation costs therefore are: $H(A\text{-}R) + \int_0^{D-R/Y} F(R+Yt)e^{-rt}dt + \int_{D-R/y}^{\infty} F(DY)e^{-rt}dt + \int_{D-R/Y}^{\infty} TYe^{-rt}dt$ . The first term is the tax cost of tax holiday repatriations and the second term is the cost of accumulating earnings until *D*, when repatriations begin under the normal tax *T*. The third term is the cost of permanent retentions *DY* and the fourth term is the cost of future repatriations at the normal repatriation tax *T*.

Minimizing these costs with respect to *R* yields:

$H = \int_0^{D-R/Y} F'(R+tY)e^{-rt}dt + Te^{-r(D-R/Y)}$ . We can see that this condition for retentions is much different from the repatriation decision under a permanent tax, where repatriations begin when the marginal cost of permanent accumulations reach the repatriation tax. In the case of the temporary tax reduction, a marginal increase in tax holiday repatriations saves not the constant cost of any further retentions at that point but the rising costs of further accumulations as the process begins again under the permanent normal tax. Holiday repatriations delay the onset of higher marginal costs of future deferrals and also the time at which the subsidiary would start repatriating at the 'normal' high tax price. The tax holiday allows the subsidiary to start over deferring income at initial volumes with lower marginal costs. Indeed, a company may repatriate under the holiday even if it has relatively low current accumulated deferrals because of the 'fresh start' that saves future costs on large high cost accumulations in the future. This will be particularly true if it expects sharply rising implicit and actual costs in the future.

We use the condition for optimal repatriations under the tax holiday to project the implicit costs of the repatriation tax as accumulations resume. But first we summarize evidence on our basic hypothesis that the marginal costs of avoiding the repatriation tax rise as the accumulated stock of deferrals increase

The regressions presented in Appendix Table 1 indicate the factors determining the extent to which a company took advantage of the repatriation tax holiday. They are based on linking the information from a company's CFCs from its Form 5471 at the end of 2004 with the data on its tax holiday repatriations.[24] The Form 5471s filed for each CFC reports on its current earnings, sales, and assets, the taxes it paid, and accumulated earnings not previously taxed by the United States as well as accumulations that have been taxed previously under the CFC (subpart F) rules. Parent level data are created by summing these variables across all of its CFCs. The special Form 8895 has data on qualified repatriations under the holiday. The analysis thus differs from the earlier studies cited above in using parent level responses instead of cross-sections of CFCs in different locations.

The dependent variable in the regressions shown in Appendix Table 1 is the ratio of a company's qualified repatriations to its accumulated untaxed earnings in 2004. In other words, how much of its accumulated deferrals did it repatriate under the tax holiday. Both linear and semi log versions of the specification are included. We run Tobit regressions rather than OLS since tax holiday repatriations are truncated at zero and only about half of the large MNCs in the sample took advantage of the tax holiday. The independent variables in the regressions are as follows:

1. The ratio of accumulated untaxed deferrals to 2004 income. This tests our hypothesis that the implicit cost of deferral rises as accumulations increase relative to current income or activity. If the marginal cost of avoiding deferral doesn't increase with total accumulations, there would be no necessary relationship between the share of accumulations repatriated and the stock of deferrals.

[24] The analysis in Appendix Table 1 is based on a sample of large U.S. nonfinancial corporations. The sample accounted for $247 billion of the repatriations under the 2005 tax holiday. Approximately 45 percent of the sample took advantage of the holiday and made qualified repatriations. Tax holiday repatriations were reported on Form 8895 and these were linked with the company's tax return for 2004 including its Form 5471s filed for each of its CFCs. The 5471s provided information on the CFC's sales, Earnings and Profits (E&P), foreign income taxes paid, and also its accumulated untaxed retained E&P.

Some multinational companies were excluded from the Appendix Table 1 analysis. Under the holiday companies which had booked the potential U.S. tax for financial reporting purposes and therefore did not have 'permanently reinvested earnings' could not bring back more than $500 million under the holiday. The small number of companies in this category was excluded because of this constraint. Companies with negative accumulated retained earnings in 2004 were also excluded.

2. The parent's average effective foreign tax rate. This rate indicates the holiday tax saving compared to normal dividends.

3. The ratio of previously taxed accumulations to total foreign sales. These accumulations can be repatriated free from any U.S. tax.

4. The ratio of total tangible capital to sales. This variable may reflect the amount of deferred income invested in the foreign business and indicates opportunities for productive investment in the future.

5. The parent's R&D intensity in terms of the ratio of qualified R&D to sales. This variable indicates the parent's industrial intangibles available to the foreign operation.

6. The company's profit margin on foreign sales. This variable indicates income that is too great to be reinvested profitably in the foreign business.

In addition, in some regressions the ratio of accumulated deferrals to current earnings is interacted with the effective foreign tax rate. If a company has a high effective foreign tax rate it may not choose to repatriate under the holiday because its tax saving relative to normal distributions is lower. Also, it is more likely to have previously distributed excess income not invested in its operations in the past.

The Tobit regressions 1 and 3 in Appendix Table 1, in which the retentions-effective tax rate interacted term is included, confirm that the implicit cost of deferring income rises as accumulations increase relative to current earnings. Companies are more willing to pay the holiday tax price. The estimated coefficient on deferrals relative to income is nearly significant at the one percent level in the linear version and significant at the .1 percent level in the semi log specification. But the interaction terms indicate that as the effective foreign tax rate rises for a given level of accumulated deferrals, companies are less willing to pay the tax holiday price. Fewer accumulations have an *implicit* cost above the potential holiday tax rate.

The other independent variables tend to have the expected sign. In both specifications, the company's foreign profit margin on sales and its domestic R&D intensity have positive coefficients which are highly significant, greater than at the 1 percent level. Highly profitable operations exploiting

parent intangibles have few profitable opportunities for investing all of their profits abroad. By the same token the coefficient for the foreign ratio of tangible capital to sales is negative and significant at the 10 percent level in the linear specification and at the 5 percent level in the semi log version. More of earnings are invested in real assets. And, as expected, greater accumulations of previously taxed income lowered tax holiday repatriations because they could be brought back free from any U.S. tax. These findings will be important in designing the minimum tax and the one-time tax on past accumulations when dividends become exempt.

The regressions presented in columns 2 and 4 in Appendix Table 1 do not include the interaction term. The ratio of deferrals to current income is highly significant in the semi log version but not in the linear one. Controlling for the potential tax benefit of the holiday seems important. In both of these regressions, the effective foreign tax rate has a negative coefficient significant at the 5 percent level. As expected companies with higher foreign tax burdens took less advantage of the tax holiday. When the retentions ratio-tax interaction term is introduced, the effective foreign tax rate by itself becomes statistically insignificant. Its impact depends on the level of accumulated retained income.

Appendix Table 2 presents an alternative specification using total current sales as a more consistent scaling variable. The dependent variable is the ratio of tax holiday repatriations to sales. The two columns differ in the construction of the accumulated deferral variables. In the first column the two variables are the ratio of accumulated deferrals to sales and the square of that ratio. In the second column tangible assets are first netted from accumulated retentions. This is intended to leave assets that are more likely to be repatriated under the tax holiday. The squared variables are added to reflect the possibility of disproportionate repatriations as the stock of deferrals grows.

In the first column of Appendix Table 2, the ratio of accumulated deferrals to sales is highly significant and the squared variable is significant at the 10 percent level. However, when real capital is netted from accumulations in the second column, the squared variable has a high level of significance, even greater than the basic ratio. Netting out invested real capital seems to focus on retentions with the sharply rising marginal cost. As in Appendix Table 1, parent R&D intensity has a highly significant

positive coefficient. The foreign profit margin is significant at the 10 percent level in the first column and is easily significant at the one percent level in the second. Profitable high tech foreign subsidiaries were more likely to make larger tax holiday repatriations at any given level of retentions.

We now turn to projecting the cost of deferrals as they accumulate using the analytic model. The *F(•)* function which gives the cost of accumulating deferrals, relative to annual income, is assumed to be quadratic, which makes the marginal cost of additional deferrals linear. (We assume marginal costs are zero at the origin.) For simplicity, we assume that the company has a 20 year time horizon and that it would not commence repatriations during that period. We further assume a high annual discount rate equal to 10 percent. This is based on the company's uncertainty about future corporate tax rates, the prospects of another tax holiday, the possibility of the enactment of dividend exemption, and the possibility of future losses that would lower future repatriation taxes. The company is assumed to have a foreign tax rate of 5 percent, making the tax cost of repatriations under the holiday equal to 4.5 percentage points.

The one data point required to apply the optimal tax holiday strategy condition is the number of years of income retained after the holiday. That together with our assumptions permits us to identify the single parameter in the linear marginal cost of deferrals function. In the sample of companies making tax holiday repatriations with profit margins on sales in excess of 20 percent, which is the weighted mean in the sample, the average amount retained was approximately two years of income.

As expected under our assumptions, the marginal cost of deferral is very low immediately after the tax holiday repatriations, but after 10 years, that is, in the year 2015, it rises to about 7 percentage points. This is consistent with BEA which data indicate that total retained earnings of nonbank affiliates abroad at the end of 2010 were almost double the amount at the end of 2004 even after the large tax holiday repatriations in 2005 and the severe recession. Thus in the effective tax rate simulations in the text, we are conservative in assuming a cost of 5 percentage points for a mature highly profitable, R&D intensive company.

## Appendix B

## Description of the Effective Tax Rate Simulations

This appendix provides details on and formulas for the calculation of the effective tax rates (ETRs) shown in Table 1. The ETR calculations are for real investment undertaken by a U.S. parent corporation in a subsidiary located either in a low-tax (LT) or high-tax (HT) foreign country. We calculate these rates under various policy alternatives and distinguish between income shifting opportunities available before and after the introduction of check-the-box (CTB). In the post-CTB cases, we allow the parent to shift income from the foreign investments in LT and HT to a hybrid entity in a pure tax haven.

The ETRs are calculated assuming that there are already ongoing operations in each country and that new discrete investments in HT and LT are being considered. The HT subsidiary produces a routine good and earns the normal return on its capital. The new discrete investment in LT produces a high tech good that exploits a U.S. developed intangible asset like a patent and earns a high excess return. The investment in LT therefore permits the parent to shift excess returns now taxed in the United States to the subsidiary in LT.[25] This income shifting is accomplished through the underpayment of royalties and is a function of the difference in tax rates between the LT country and the United States. If the transfer pricing rules worked perfectly this type of income shifting would not be possible and the excess return would all be paid back to the United States as a royalty.

We also assume that any new LT investment creates opportunities to lower the foreign tax rate paid in HT by shifting income to LT. In other words, new investment in the LT country increases the amount of income that can be shifted there from existing operations in the HT country. This is possible because the added investment in LT generates more intercompany transactions, for example, that allow for greater profit shifting through transfer price manipulation. Similarly, we assume that any new discrete investment in HT increases the amount of income that can be shifted to the existing operation in LT. The incentive to shift income between LT and HT increases with the tax rate differential between the

[25] We could have also considered the parent decisions as to whether to manufacture the product based on the new intangible in LT or manufacture it in the US. The set-up would be similar except that the amount shifted would be a proportion of the normal return instead of the excess return.

countries. We assume that this shifting is symmetric in terms of the amount of income shifted. This simple set-up allows us to consider each investment separately in the ETR calculations.

Check-the-box creates further opportunities for tax planning through the use of hybrid entities in tax havens. As explained in the text, introducing the possibility of using hybrids entities in tax havens as a destination for income from HT and LT is the same as assuming that the host countries had lowered their tax rates. Thus, introducing CTB will have an impact on our ETRs.

We calculate the effective tax rate on a new discrete investment of one unit of capital by accounting for all tax payments and deductions made by the U.S. parent to both the host and home country and then dividing the tax payments by the pre-tax income generated by the investment.[26] For simplicity, we ignore debt, assume that depreciation for tax purposes is equal to economic depreciation, and ignore any investment credits so that the host country effective tax rate for an investment undertaken by a domestic firm in the host country is equal to the host country statutory rate.

It is important to be clear as to how the tax benefits of profit shifting created by the new foreign investment we consider are assigned. We consider each investment separately so when we account for the taxes associated with the investment in LT, for example, we include the tax benefits that accrue from (i) any underpayment of royalties to the parent, (ii) any shifting of income from HT to LT, and (iii) any post-CTB shifting of income to a hybrid entity in the tax haven. When considering the investment in HT, we include the tax benefits of (i) any income shifted to LT and (ii) any income shifted to the entity in the haven (post-CTB).

We now turn to the formulas we use to calculate the ETRs under the various scenarios. Let $t_L$ equal the statutory tax rate in low-tax country, $t_H$ equal the statutory tax rate in high-tax country, and $t_U$ be statutory tax in the United States. In our simulations we assume the LT statutory rate is 5 percent, the HT rate is 25 percent, and the U.S. rate is 30 percent. We assume the tax haven has no tax on corporate

[26] Grubert (2004) uses a similar approach to calculate effective tax rates for investment in low and high tax countries under a variety of scenarios that take income shifting and the use of hybrid entities into account.

income. We denote income shifted from the United States to the LT operation as $S_U$ and income shifted from the HT to the LT operation as $S_H$.

Income shifting is not costless to the parent corporation. Tax planning through income shifting uses valuable resources and there is always the risk of penalties after audit. We assume a cost of income shifting that is a quadratic function of the amount shifted relative to the amount of real capital placed in a location and that differs depending on whether intangibles are being exploited.[27] The costs of shifting functions for the two types of pre-CTB shifting are as follows:

$$C_U(S_U) = a(S_U/K_L)^2 K_L$$

$$C_H(S_H) = b(S_H/K_L)^2 K_L = b(S_H/K_H)^2 K_H$$

where $K_L$ is capital placed in LT, $K_H$ is capital placed in HT, $C_U(S_U)$ is the cost of shifting income from the U.S. to LT, and $C_H(S_H)$ is the cost of shifting from HT to LT. We discuss calibration of the shifting functions in the next section.

***Current law before Check-the-Box***

We start by deriving the ETR formulas under current law. The formulas will differ depending on the foreign tax credit position of the parent corporation. Under current law, firms with excess credits pay no U.S. taxes on dividend repatriations to their U.S. parents while firms in excess limitation owe residual taxes to the U.S. Treasury when dividends are remitted from operations in low-tax countries. We assume that repatriation taxes impose an additional tax burden for foreign investment and therefore must be incorporated in the ETR calculations. The repatriation tax burden for investment in LT and HT, which we denote $t_{L,D}$ and $t_{H,D}$ respectively, include both the tax paid on actual distributions and the implicit deadweight loss attributable to repatriation planning. In our simulations, we set $t_{L,D}$ equal to 5 percent and $t_{H,D}$ equal to 1 percent.

[27] Grubert and Slemrod (1998) use a similar cost of shifting function to examine how income shifting opportunities can impact the after-tax profits of operating in Puerto Rico. Grubert (2003) derives the cost of capital for investments in low and high tax countries using a model in which intercompany transactions provide the opportunity for income shifting. He also uses a quadratic cost of shifting function. The model shows clearly how the conventional cost of capital is altered when the benefits of income shifting are introduced.

Like the taxation of dividend income, the taxation of royalties under the current system depends on the parent's foreign tax credit position. Firms in excess limitation pay full U.S. taxes on royalty remittances received from abroad. Firms in excess credit positions can shield U.S. taxes owed on royalty remittances with excess credits and therefore pay no U.S. tax on royalties.

*Excess limitation case*

To calculate the ETR we first need to know the optimal amount of income to be shifted. We start by solving for the optimal amount of income shifted through the underpayment of royalties on the U.S. developed intangible. Note that in the absence of any cost of income shifting, the optimal royalty payment would be zero. Let $R_T$ be the true royalty and R be the royalty actually paid. The amount of income shifted to the affiliate, $S_U$, is the difference between the true royalty and the actual royalty $S_U = R_T-R$. The net tax benefit to income shifting associated with the investment in LT in the excess limitation case is therefore $(R_T-R)(t_U-t_L-t_{L,D}) - C_U(R_T-R)$.[28] Since $R_T$ is given (it is known), solving for the optimal royalty payment is the same as solving for optimal $S_U$ and gives us $S_U^* = (t_U-t_L-t_{L,D})/2a$ where * denotes the optimal value. The optimal royalty, R* is $R_T-(t_U-t_L-t_{L,D})/2a$.

To calculate ETRs we need to calibrate the shifting function. On the basis of several sources of evidence we assume a normal return to investment of 10 percent and an excess return of 30 percent for a high tech investment in a location with a 25 percent tax differential. Furthermore, one third of the excess return is paid back as royalties. Grubert and Altshuler (2008) indicate that in 2002 the profit margin on sales earned by Irish subsidiaries, after the payment of royalties, was three times the average margin of all subsidiaries. Grubert (2012) reports that in 2004 the average profit margin on all foreign sales was almost twice the worldwide average. The one-third, two-third split between parent and subsidiary is based on parallel regressions of royalties paid and earnings and profits and how they depend on parent R&D (see Mutti and Grubert 2006). Accordingly, an excess return of 30 percent, with 10 percent paid in royalties,

[28] We assume here that the tax treatment of the cost of shifting is incorporated in the parameter of the cost of shifting function. In this way, we do not make any assumptions regarding where the cost of shifting is deducted for tax purposes.

for a 25 percent tax differential, seems conservative because the Irish and foreign profit margin averages include some non-high tech investments.

If the tax differential between the low tax country and the U.S. is 25 percentage points, for example, and the excess return was 30 percent, using our cost of shifting function and assuming that firms were optimally shifting under current law results in a parameter a equal to .625 (=.25/2(.3-.1)).

The net benefit of income shifted through transfer pricing (or, alternatively but not modeled, debt shifting) from HT to LT is $S_H(t_{H\,+}t_{H,D} - t_L - t_{L,D}) - C_H(S_H)$. Solving for optimal $S_H$ gives $S_H^* = (t_{H\,+}t_{H,D} - t_L - t_{L,D})/2b$. We also need to calibrate the cost of shifting function for profit shifting between LT and HT. We assume that the ability to engage in income shifting in the presence of an intangible is much greater than it is when there is no intangible available. In the simulations we let b be 4.5 times the value or a (b=2.81).

To calculate the ETR we add up the taxes, $T_{L,}$ associated with the discrete investment of one unit of $K_L$ in LT:

$$T_L = (t_{L+}t_{L,D})\, r_N - (t_U - t_L - t_{L,D})S_U^* + a(S_U^*)^2 - (t_{H\,+}t_{H,D} - t_L - t_{L,D})S_H^* + b(S_H^*)^2$$

$$= (t_{L+}t_{L,D})\, r_N - (t_U - t_L - t_{L,D})^2/2a + (t_U - t_L - t_{L,D})^2/4a - (t_{H\,+}t_{H,D} - t_L - t_{L,D})^2/2b + (t_H + t_{H,D} - t_L - t_{L,D})^2/4b$$

$$= (t_{L+}t_{L,D})\, r_N - (t_U - t_L - t_{L,D})^2/4a - (t_{H\,+}t_{H,D} - t_L - t_{L,D})^2/4b$$

where $r_N$ is the normal return to capital. Note that the quadratic cost of shifting function results in a net benefit of each type of income shifting equal to one-half the gross benefit.

The ETR is found by dividing the tax associated with the additional capital placed in LT with the pre-tax return, $r_N$, on the capital. Thus, the ETR for the excess limit (EL) case, which we denote ETR(EL, LT), is as follows:

$$ETR(EL, LT) = (t_{L+}t_{L,D}) - (t_U - t_L - t_{L,D})^2/4ar_N - (t_{H\,+}t_{H,D} - t_L - t_{L,D})^2/4br_N.$$

*Excess credit case*

When the parent has excess foreign tax credits, the royalty paid from the affiliate is shielded from U.S. tax by the excess credits and we credit this benefit to the LT investment. In this case there should be no underpayment of royalties. We assume, however, that parents take into consideration that they may not always be in an excess credit position when royalties are paid and therefore the optimal royalty will be

less than the 'true' royalty. The net tax benefits to shifting in this case are $t_U R + (t_U - t_L)S_U - C(S_U)$. The first term is the reduction in U.S. tax due to the royalty payment, the second is the benefit of retaining any underpayment of royalty in the low-tax location, and the third is the cost of shifting.

We assume that the costs of shifting in the excess limit and excess credit cases differ and parameterize the cost function to give a higher royalty and therefore lower value for the amount retained in the excess credit case. The cost of shifting function becomes $C(S_U) = c(S_U/K_L)^2 K_L$. Solving for the optimal amount of shifting gives $S_U^* = (t_U - t_L)/2c$ and $R^* = R_T - S_U^*$. In the simulation, we use a parameter value for c that results in a royalty of .15 and income shifting amount of .15.

We also must take into account that the interest allocation rules under current law are binding for firms in excess credit positions. The allocation of domestic interest expense against foreign source income reduces the foreign tax credit limitation and therefore decreases foreign tax credits. As a result, any allocation of domestic interest expense to foreign source income is lost as a deduction. We assume that domestic interest expense that must be allocated abroad is 15 percent of the normal return and therefore increases the effective tax rate by $.15 r_N t_U$ for firms in excess credits.

The taxes associated with the investment in LT for the excess credit case can be written:

$$T_L = t_L r_N + .15 r_N t_U - t_U R^* - (t_U - t_L)S_U^* + c(S_U^*)^2 - (t_H - t_L)S_H^* + b(S_H^*)^2.$$

Dividing by $r_N$ gives us the ETR:

$$ETR(EC, LT) = t_L + .15 r_N t_U - t_U(R_T - (t_U - t_L)^2/4c)/r_N - (t_U - t_L)^2/4cr_N - (t_H - t_L)^2/4br_N.$$

The current law (CL) effective tax rate for the LT case, ETR(CL,LT), is a weighted average of the excess limitation and excess credit cases where p is the weight given to the excess limit case:

$$ETR(CL, LT) = p*ETR(EL,LT) + (1-p)*ETR(EC,LT).$$

We assume that 20 percent of parent firms are in excess credit positions in our simulations.

We turn now to the relatively simple formulas for the ETRs under current law for investment in HT. Since the routine investment in the HT affiliate earns only the normal return the ETR can only be lowered below the statutory rate in HT through income shifting to the LT operation. The ETR for the HT investment in the excess limit case, which we denote ETR(EL, HT) is as follows:

$$ETR(EL, HT) = (t_{H+}t_{H,D}) - (t_{H+}t_{H,D}-t_L-t_{L,D})^2 /4br_N.$$

The excess credit case is simply the EL case without any repatriation tax (and any shifting related to intangibles):

$$ETR(EC, HT) = t_H + .15t_U - (t_H - t_L)^2 /4br_N.$$

Again, the current law ETR is a weighted average of the two foreign tax credit cases:

$$ETR(CL, HT) = pETR(EL,HT) + (1-p)ETR(EC,HT).$$

***Dividend exemption before Check-the-Box***

The ETR formulas for dividend exemption (DE) are straightforward. There is no repatriation tax burden and royalties are fully taxed. The formulas for LT and HT investment are:

$$ETR(DE, LT) = t_L - (t_U-t_L)^2 /4ar_N - (t_H - t_L)^2 /4br_N, \text{ and}$$

$$ETR(DE, HT) = t_H - (t_H - t_L)^2 /4br_N.$$

***Current law after Check-the-Box***

Check-the-box opens up generous tax planning opportunities through the use of hybrid entities in tax havens. As explained in the text, setting up and shifting income to hybrid entities is relatively easy. In our calculations, we assume that half of both the high tax and low tax income is shifted to the haven at no cost. This makes calculating effective tax rates straightforward since the availability of the tax haven to shift one half of income has the effect of lowering the rates in both LT and HT by one-half.

The taxes associated with the LT investment are therefore:

$$T_L = ((1/2)t_{L+}t_{L,D})\, r_N - (t_U-(1/2)t_L-t_{L,D})^2 /4a - (t_{H+}t_{H,D}-t_L-t_{L,D})^2 /8b.$$

The ETR for the excess limitation case becomes with check the box:

$$ETR(CTB,EL,LT) = ((1/2)t_{L+}t_{L,D}) - (t_U - (1/2)t_L-t_{L,D})^2 /4ar_N - (t_{H+}t_{H,D}-t_L-t_{L,D})^2 /8br_N.$$

We adjust the excess credit case for the tax planning opened up by check-the-box similarly:

$$ETR(CTB,EC,LT) = (1/2)t_L + .15t_U - t_U(R_T-(t_U-(1/2)t_L)^2 /4c)/r_N - (t_U-(1/2)t_L)^2 /4cr_N - (t_H - t_L)^2 /8br_N$$

As before, the formulas for HT investment are the same as for LT except there is no shifting from the U.S. parent:

$$ETR(CTB,EL,HT) = ((1/2)t_{L+}t_{L,D}) - (t_{H+}t_{H,D}-t_L-t_{L,D})^2 /8br_N$$

$$ETR(CTB,EC,HT) = (1/2)t_H + .15t_U - (t_H - t_L)^2 / 8br_N$$

***Dividend exemption after Check-the-Box***

The ETRs for the dividend exemption cases after CTB are as follows:

$$ETR(CTB,DE, LT) = (1/2)t_L - (t_U-(1/2)t_L)^2 / 4ar_N - (t_H - t_L)^2 / 8br_N$$

$$ETR(CTB,DE, HT) = (1/2)t_L - (t_H - t_L)^2 / 8br_N$$

***Japanese type dividend exemption***

The Japanese type dividend exemption system imposes a minimum tax, $t_M$, in each location with an exception for active business income. As a result, the LT and HT real investments qualify for the exception. The tax haven does not since it does not have real operations. Any income in the tax haven pays the U.S. rate and, as a result, it has no benefit for income shifting purposes. The benefits of the "routine" type income shifting --- underpaying royalties and shifting income from HT to LT --- are still available, however. The ETRs are the same as those available under dividend exemption before check-the-box:

$$ETR(JAPAN, LT) = t_L - (t_U-t_L)^2 / 4ar_N - (t_H - t_L)^2 / 4br_N, \text{ and}$$

$$ETR(JAPAN, HT) = t_H - (t_H - t_L)^2 / 4br_N.$$

***Minimum tax with and without expensing***

Adjusting the ETRs to take into account the minimum tax is straightforward: whether the income is shifted to the haven or not, it is subject to the minimum tax rate. There is still an advantage, however, to shifting the income coming from the high tax investment to the haven entity. Since we assume half of the income is shifted to the haven, the benefit of shifting between HT and LT is now the average of the HT rate and the minimum tax rate compared with the minimum tax rate. This gives an ETR for the no expensing (NE) case:

$$ETR(MIN, NE, LT) = t_M - (t_U-t_M)^2 / 4ar_N - (t_H - t_M)^2 / 8br_N.$$

For the case with expensing (E), the ETR becomes:

$$ETR(MIN, E, LT) = t_L - (t_U-t_M)^2 / 4ar_N - (t_H - t_M)^2 / 8br_N.$$

The high tax cases are adjusted, as follows, by eliminating the income shifting from the LT case since there is only a routine investment involved and substituting the appropriate rates. Since the returns on the routine investment HT is not subject to the minimum tax, there is no impact of expensing.

$$ETR(MIN, NE, HT) = ETR(MIN, E, HT) = (1/2)t_H - (t_H - t_M)^2 / 8br_N.$$

Table 1
**Effective Tax Rate Simulations**

| | **Before Check-the-box** | **After Check-the-box** |
|---|---|---|
| **Low tax investment** (statutory rate =.05) | | |
| Current law | -.182 | -.236 |
| Dividend exemption | -.236 | -.295 |
| Japan minimum tax | | -.236 |
| Minimum tax without expensing | | .056 |
| Minimum tax with expensing | | -.044 |
| Full inclusion | | .300 |
| | | |
| **High tax investment** (statutory rate = .25) | | |
| Current law | .242 | .130 |
| Dividend exemption | .214 | .107 |
| Japan minimum tax | | .214 |
| Minimum tax without expensing | | .121 |
| Minimum tax with expensing | | .121 |
| Full inclusion | | .300 |

**Notes:** See appendix for details.

Table 2
**Tax Revenue on $100 Investment in Low and High Tax Countries**

| | **Before Check-the-Box** | | **After Check-the-Box** | |
|---|---|---|---|---|
| | U.S. tax revenue | Foreign tax revenue | U.S. tax revenue | Foreign tax revenue |
| **Low tax investment** (statutory rate =.05) | | | | |
| Current law | -5.20 | 0.69 | -4.87 | 0.54 |
| Dividend exemption | -6.00 | 0.79 | -6.60 | 0.62 |
| Japan minimum tax | | | -6.00 | 0.79 |
| Minimum tax without expensing | | | -1.33 | 1.01 |
| Minimum tax with expensing | | | -2.33 | 1.01 |
| Full inclusion | | | 2.50 | 0.50 |
| **High tax investment** (statutory rate = .25) | | | | |
| Current law | 0.16 | 1.90 | 0.15 | 1.10 |
| Dividend exemption | 0.00 | 1.79 | 0.00 | 1.07 |
| Japan minimum tax | | | 0.00 | 1.79 |
| Minimum tax without expensing | | | 0.82 | 1.16 |

**Notes:** See appendix for details.

Appendix Table 1
**Tax Holiday Repatriations and Retained Earnings**
(Tobit Regressions)

| | Dependent variable: | | | |
|---|---|---|---|---|
| Independent Variables: | Repatriations/ Accumulated Deferrals | | Log of Repatriations/ Accumulated Deferrals | |
| Accumulated Deferrals/2004 Income | 0.0436<br>(0.0171) | 0.0059<br>(0.0068) | | |
| Ratio of Deferrals to Income*Effective Foreign Tax Rate | -0.1871<br>(0.0788) | | | |
| Log of Ratio of Deferrals to Income | | | 0.2637<br>(0.0759) | 0.1055<br>(0.0319) |
| Log of Ratio of Deferrals to Income*Effective Foreign Tax Rate | | | -0.8335<br>(0.3404) | |
| R&D/Sales of Parent | 3.312<br>(0.9668) | 2.990<br>(0.8472) | 2.2637<br>(0.7380) | 2.2845<br>(0.7407) |
| Foreign Profit Margin on Sales | 0.9010<br>(0.2824) | 0.7414<br>(0.2480) | 0.8210<br>(0.2173) | 0.8018<br>(0.2189) |
| Effective Foreign Tax Rate | 0.1573<br>(0.4357) | -0.5333<br>(0.2677) | 0.7146<br>(0.5325) | -0.4849<br>(0.2327) |
| Ratio of Previously Taxed Income to Sales | -0.6573<br>(0.3703) | -0.5423<br>(0.3176) | -0.6087<br>(0.2934) | -0.5911<br>(0.2909) |
| Ratio of Tangible Capital to Sales | -0.1074<br>(0.0801) | -0.0814<br>(0.0698) | -0.0891<br>(0.0611) | -0.0864<br>(0.0610) |

**Notes:** N=413. Standard errors in parenthesis. Companies with nonpositive retained earnings excluded. One added to dependent variable in logarithmic specification.

Appendix Table 2
**Tax Holiday Repatriations Relative to Sales**
(Tobit Regression)

| | Dependent Variable: | |
|---|---|---|
| Independent Variables: | Repatriation/Sales | |
| Accumulated Deferrals/Sales | 0.4566<br>(0.0582) | |
| (Accumulated Deferrals/Sales)$^2$ | 0.0116<br>(0.0065) | |
| (Accumulated Deferrals – Real Capital)/ Sales | | 0.1768<br>(0.0339) |
| [(Accumulated Deferrals – Real Capital)/ Sales]$^2$ | | 0.0362<br>(0.0051) |
| (R&D/Sales) of Parent | 1.81<br>(0.413) | 1.86<br>(0.451) |
| Foreign Profit Margin | -0.302<br>(0.158) | 0.551<br>(0.121) |
| Effective Foreign Tax Rate | -0.163<br>(0.133) | -0.167<br>(0.144) |
| Ratio of Previously Taxed Income to Sales | -0.021<br>(0.162) | -0.270<br>(0.146) |
| Tangible Capital/Sales | -0.0527<br>(0.0346) | |

**Notes:** N=413. Standard errors in parenthesis. Companies with nonpositive retained earnings excluded. Accumulated deferrals are net of foreign tangible assets.


# Moving to a Territorial Income Tax: Options and Challenges

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**CRS Report for Congress**
*Prepared for Members and Committees of Congress*

# Summary

Among potential tax reforms under discussion by Congress is revising the tax treatment of foreign source income of U.S. multinational corporations. Some business leaders have been urging a movement toward a territorial tax, which would eliminate some U.S. income taxes on active foreign source income. Under a territorial tax, only the country where the income is earned imposes a tax. Territorial proposals include the Grubert-Mutti proposal (included in President Bush's Advisory Panel on Tax Reform proposal in 2005) and, more recently, a draft Ways and Means Committee proposal and a Senate bill, S. 2091. The Fiscal Commission also proposed a territorial tax. Proposals have, however, also been made to increase the taxation of foreign source income, including S. 727, and proposals by President Obama.

Although the United States has a worldwide system that includes foreign earnings in U.S. taxable income, two provisions cause the current system to resemble a territorial tax in that very little tax is collected. Deferral delays paying taxes until income is repatriated (paid as a dividend by the foreign subsidiary to its U.S. parent). When income is repatriated, credits for foreign taxes paid offset the U.S. tax due. Under cross-crediting, unused foreign tax credits from high tax countries or on highly taxed income can be used to offset U.S. tax on income in low tax countries.

Some proponents of a territorial tax urge such a system on the grounds that the current system discourages repatriations. Economic evidence suggests that effect is small, in part because in normal circumstances a large share of income is retained for permanent reinvestment. Amounts held abroad may have increased, however, as firms lobbied for another repatriation holiday (similar to that adopted in 2004) that allowed firms to exempt most dividends from income on a one-time basis. Opponents are concerned about encouraging investment abroad. A territorial tax is generally not viewed as efficient because it favors foreign investment, but that increased outflow of investment is likely to have a small effect relative to the U.S. economy. Artificial shifting of profits into tax havens or low tax countries is a current problem that could be worsened under some territorial tax designs, and proposals have included measures to address this problem.

Proposals also address the transitional issue of the treatment of the existing stock of unrepatriated earnings. The Ways and Means proposal would tax this stock of earnings, but at a lower rate, and use the revenues to offset losses from other parts of the plan, which would lead to a long-run revenue loss. S. 2091 has a similar approach. The Grubert-Mutti proposal does not have a specific transitional tax, but would raise revenue largely due to its disallowance of parent overhead expenses aimed at reducing profit shifting. The other two proposals also contain provisions to address profit shifting.

In addition there are complicated issues in the design of a territorial tax, such as how to treat branches and dividends of firms in which the corporation is only partially owned. A number of issues arise from the ending of foreign tax credits, with perhaps the most significant one being the increased tax on royalties, which are currently subject to tax, have low or no foreign taxes, and would lose the shield of excess credits.

The final section of the report briefly discusses some alternative options, including those in S. 727 and in the Administration proposals. It also discusses hybrid approaches that combine territorial and worldwide systems in a more efficient way, including eliminating the disincentive to repatriate. One such approach is a minimum tax on foreign source income, which is proposed by the President in the context of current rules, but could be combined with a territorial system.

# Contents

## Tables



## Appendixes



## Contacts

# Introduction

Tax reform is a perennial issue before Congress. One area of increasing attention is the taxation of U.S. companies on the income they earn abroad. Recently, proposals have been made to, in some cases, decrease taxes and in others to increase these taxes.

Businesses leaders have been urging a movement toward a territorial tax, which would generally eliminate U.S. income taxes on active foreign source income. Such a proposal (presumably based on one developed by Grubert and Mutti) was included in the President's Advisory Panel on Tax Reform in 2005,[1] more recently in a draft proposal by Ways and Means Committee Chairman Dave Camp,[2] and in a bill, S. 2091, introduced by Senator Enzi. The National Commission on Fiscal Responsibility and Reform (referred to as the Fiscal Commission) also proposed a territorial tax in general terms.[3]

Proposals have also been made to move in the opposite direction and increase the taxation of foreign source income, including S. 727, introduced by Senators Wyden and Coats, which would use the significant revenues gained to help finance a corporate income tax rate cut. President Obama has included increased taxes on foreign source income in his budget outlines and, more recently, in his framework for business tax reform, as a revenue source for rate reduction.[4]

Because of various features in the current tax system, the U.S. tax system already bears a close resemblance, in terms of revenue collected, to a territorial tax. Tax on the income of foreign subsidiaries is deferred until repatriated (paid as dividends to the U.S. parent) and tax can be avoided by not repatriating income. The system limits credits claimed for foreign taxes paid to U.S. tax on foreign income. The limit, however, is on an overall basis, permitting unused credits from high-tax countries to shield income from low-tax countries, or income that bears little foreign tax, from being taxed in the United States. Because firms have flexibility in timing repatriations, the residual effective tax rate on foreign income is estimated at only 3.3%.[5] Some types of income, such as royalties, are treated more favorably under the current system than they would be under a territorial tax.

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[1] The President's Advisory Panel on Federal Tax Reform, *Final Report*, November 1, 2005, at http://govinfo.library.unt.edu/taxreformpanel/final-report/index.html. The Grubert-Mutti proposal was the territorial proposal under discussion for a number of years. It is outlined in Harry Grubert and John Mutti, Taxing *International Business Income: Dividend Exemption Versus the Current System* (Washington, DC, AEI Press, 2001). It is discussed in further detail in Rosanne Altshuler and Harry Grubert, "Where Will They Go if We Go Territorial? Dividend Exemption and the Location Decisions of U.S. Multinational Corporations," *National Tax Journal* (December 2001), pp. 787-809. Because the current U.S. tax system collects little revenue, and because of features of the Grubert-Mutti proposal to allocate parent company deductions, this proposal would raise revenue.

[2] See various discussions and drafts at the Ways and Means Committee website, at http://waysandmeans.house.gov/taxreform/.

[3] The National Commission on Fiscal Responsibility and Reform, *The Moment of Truth*, at http://www.fiscalcommission.gov/sites/fiscalcommission.gov/files/documents/TheMomentofTruth12_1_2010.pdf.

[4] *The President's Framework for Business Tax Reform: A Joint Report by the White House and the Department of the Treasury*, February 2012, at http://www.treasury.gov/resource-center/tax-policy/Documents/The-Presidents-Framework-for-Business-Tax-Reform-02-22-2012.pdf.

[5] Melissa Costa and Jennifer Gravelle, "Taxing Multinational Corporations: Average Tax Rates," presented at a Conference of the American Tax Policy Center, October 2011, and forthcoming in *Tax Law Review* at http://www.americantaxpolicyinstitute.org/pdf/Costa-Gravelle%20paper.pdf.

Economists have traditionally analyzed the foreign tax system in terms of economic efficiency. Economic theory tends to support, on efficiency grounds, a worldwide system in which income from U.S. investment earned abroad is subject to the same tax, or as close to the same tax as possible, as that on domestic investment. It does not support a territorial tax, and most proposals in the past were to move closer to an effective worldwide tax (see **Appendix**). At the same time, if such a change is not feasible, another question becomes whether moving to an explicit territorial tax would be better or worse than the present system. The fundamental issues are

- the effects on disincentives to repatriate income,
- to what extent the revision will divert investment from the United States,
- the effects on artificial profit shifting,
- transition issues,
- administrative and compliance considerations, and
- the revenue consequences.

There is no single blueprint for a territorial tax and the answers to these questions depend, to some extent, on specific design choices.

This report first explains how the international tax system works and describes the magnitude and distribution of foreign source income and taxes. The report then focuses on alternative features of a territorial tax and their consequences. It also contains, in a final section, a brief discussion of options that move in the opposite direction and other alternatives that do not fit into either the territorial or worldwide approach (such as current taxation of foreign source income but at a lower rate).[6]

# How the International Tax System Works

The current U.S. tax system is a hybrid. It has some elements of a residence-based or worldwide tax, where income of a country's firms is taxed regardless of its location. It also has some elements of a source based or territorial tax, where all income earned within a country is taxed only by that country regardless of the nationality of the firms. The provisions that introduce territorial features are deferral and cross-crediting. There are a number of complex interactions that will affect both the design of a territorial or other tax revision and the consequences of those changes.

## Deferral

Deferral allows a firm to delay taxation of its earnings in foreign subsidiaries until the income is paid as a dividend to the U.S. parent company. Although a territorial tax is often focused on exempting foreign source income that under current law is taxed when repatriated, there are four basic categories of foreign source income, three of which are not eligible for deferral. They are

[6] Fundamental economic issues are discussed in CRS Report RL34115, *Reform of U.S. International Taxation: Alternatives*, by Jane G. Gravelle.

profits of foreign incorporated subsidiaries; current payment income, such as royalties and interest payments; branch income; and Subpart F income.

## Profits of Foreign Incorporated Subsidiaries

U.S. multinationals are not currently taxed on the profits of their subsidiaries incorporated abroad (except for "Subpart F Income" discussed below). Rather they defer payment of taxes until the income is received by the parent as a dividend (repatriated). U.S. tax is then due on the dividend and, because the dividend is after foreign tax, an additional amount (called a gross-up) is added to taxable income to reflect the foreign taxes paid and place the income on a pre-tax basis.[7] A foreign tax credit is then allowed against this U.S. tax.

## Current Payment Income

Current payment income is income that is received as a direct payment, such as royalties and interest. It is taxed currently. This income is usually deductible as an expense in the foreign country and, indeed, may not constitute true foreign source income, at least in the case of royalties that could be viewed as more like export income.

## Branch Income

Branch income is income from operations that are carried out without a separately incorporated foreign subsidiary. Income of operations organized as foreign branches rather than as separately incorporated subsidiaries is also taxed currently. For tax purposes, branch gross income and deductions are combined with parent income just as if the operation were taking place in the United States. Although branch income is not eligible for deferral, it can be a beneficial form of organization in some cases. If a firm is experiencing a loss, which may be the case with start-ups or mineral or exploration companies, the losses can only reduce U.S. income if the operation is in branch form. In some cases, dividends may attract an additional withholding tax, although for most trading partners these taxes are eliminated or minimized through tax treaties. Non-tax reasons may also cause a firm to choose the branch form; this form, for example, may be particularly beneficial for financial firms in which the branch operation is backed by the assets of the worldwide firm.

## Subpart F Income

Subpart F income, named after the section of the Internal Revenue Code that imposes the rules, is income that can easily be shifted to low tax jurisdictions. Subpart F income includes passive income, such as interest and dividends, and certain sales and service income flowing between

[7] This discussion generally refers to foreign subsidiaries that are sometimes wholly owned and sometimes partially owned by a U.S. parent. The tax law defines a controlled foreign subsidiary or a controlled foreign corporation (CFC) as one in which the U.S. firm has a 10% share and 50% of the shares are owned by five or fewer 10% U.S. shareholders. A corporation in which a U.S. firm owns a 10% share but 50% is not owned by five or fewer 10% shareholders is called a non controlled Section 902 corporation or a 10/50 corporation. Smaller share ownership is portfolio investment. New data from the Internal Revenue Service reports dividends from firms that are less that 20% owned, more than 20% owned and wholly owned at 7%, 65%, and 27%, although any of these firms could potentially be CFC's and the payout ratios may differ. Filled in 1120 form at http://www.irs.gov/pub/irs-soi/08colinecount.pdf.

related parties (called foreign base company income). This income is taxed currently. Subpart F has been made less effective in recent years because of check-the-box rules that allow flexibility in choosing whether to recognize related firms as separate entities.[8] There are also specific exceptions to Subpart F rules that allow for income from active financing and insurance operations that might otherwise fall under Subpart F to be deferred. These provisions are currently part of the "extenders," provisions that are enacted with an expiration date but that are generally extended periodically. The extenders have currently expired after 2011, although some or all of them they may be extended retroactively. Also among the extenders is a look-through rule that has a similar effect to check-the-box through legislative rather than regulatory rules.[9]

## Cross-Crediting

Cross-crediting is a phenomenon that occurs when credits for taxes paid to one country can be used to offset U.S. tax due on income earned in a second country. Cross-crediting occurs because countries generally tax all income arising within their borders from both foreign and domestic firms. The U.S. system allows a credit against U.S. tax due on foreign source income currently taxed for foreign income taxes. This foreign tax credit is designed to prevent double taxation of income earned by foreign subsidiaries of U.S. corporations from facing a combined U.S. and foreign tax in excess of the U.S. tax due if the income was earned in the United States. In addition to cross-crediting across countries, cross-crediting can occur within a country if some income is subject to high tax rates and some is subject to lower tax rates.

If the foreign tax credit had no limit, a worldwide system with current taxation and a foreign tax credit would produce the same result, for firms, as a residence based tax, because the tax effectively applying would be the tax of the country of residence. Firms in countries with a higher rate than the U.S. rate would get a refund for the excess tax, and firms in countries with a lower rate than the U.S. rate would pay the difference. To protect the nation's treasury from excessively high foreign taxes causing excessive revenue losses, however, the credit is limited to the U.S. tax that would be due on the foreign source income. If applied on a country-by-country and income-by-income basis, this rule would result in higher taxes paid on incomes and/or in countries where foreign taxes are higher than U.S. taxes. The rule would also result in total taxes paid equal to the U.S. tax when foreign taxes are lower. If applied overall or in a way that can combine income subject to high taxes with income subject to low taxes, unused credits in high-tax countries (or associated with highly taxed income) can be used to offset U.S. tax due in low-tax countries or income subject to low taxes. This mechanism is called cross-crediting.

Cross-crediting is important to consider when evaluating international tax changes, including the move to a territorial tax, because cross-crediting would largely disappear with the disappearance of foreign tax credits associated with exempted income. Excess credits could no longer shield certain direct active income such as royalties from U.S. taxes.

[8] Check-the-box allows a firm, including a subsidiary of a U.S. firm, to choose to disregard (not recognize) its own subsidiary as a separate entity and consolidate that income with the parent (higher tier subsidiary) firm. For example, if a U.S. parent's subsidiary in a low-tax country lends money to its own subsidiary in a high-tax county (with deductions for interest paid), the interest income received by the low-tax subsidiary would normally be taxed as Subpart F income even if this income is not repatriated to the U.S. parent. Check-the-box allows the high-tax subsidiary to be disregarded for tax purposes so that no interest income appears.

[9] See David R. Sicular, "The New Look-Through Rule: W(h)ither Subpart F?" *Tax Notes*, April 23, 2007, pp. 349-378 for a discussion of this provision.

A variety of tax rules can affect the degree and nature of cross-crediting: separating income and credits into baskets with cross-crediting only allowed within the basket; characterizing certain royalty and export income as foreign source; restricting the use of excess credits generated from oil and gas extraction; and interest and other expense allocation rules. In addition, a provision that effectively allowed claiming of foreign tax credits when the associated income was not subjected to U.S. tax, termed foreign tax credit splitting, may have affected past practices and data. This provision was restricted in 2010.

Firms whose foreign tax payments are larger than those permitted to be credited under the foreign tax credit limit rules are said to be in an excess credit position. Firms whose tax payments are smaller are in an excess limit position.[10]

## Foreign Tax Credit Limit Baskets

While the United States has had a variety of limit rules in the past,[11] it currently has an overall limit that allows cross-crediting, separated into two significant baskets based on the type of income: an active or general basket and a passive basket. About 95% of income is in the general basket so there is much scope for cross-crediting.[12] Therefore, companies that have paid taxes higher than the U.S. rate can still (within each basket) offset U.S. taxes on income earned in low-tax countries. Higher tax rates can also offset taxes on income generally taxed at low or no rates; one example is royalties associated with active operations, which fall in the active basket and may be shielded from U.S. tax by excess foreign tax credits. Another is foreign source income from export sales, discussed below under the "Title Passage Rule."

## Separate Limit on Oil and Gas

The law also contains separate restrictions on certain other types of income, one of importance, as measured by foreign income affected, being oil and gas extraction income. A separate provision disallows credits paid on oil and gas extraction income in excess of the U.S. tax due, although they can be carried over to future years. This treatment has the effect of placing oil and gas extraction income in a separate basket, because generally this income is subject to high foreign taxes. For example, if the U.S. tax on foreign oil and gas extraction income is 35% and the foreign tax is 50%, the extra 15% credit cannot be used to offset tax on other income. This treatment has the same effect as placing this oil and gas extraction income in a separate basket. If the tax on oil and gas extraction income were lower than the U.S. tax, this income would be eligible to have the additional U.S. tax offset by excess credits on other income because income from oil and gas extraction income is not actually in a different basket.

[10] Fewer excess credit firms in recent years also led to transactions designed to generate foreign tax credits, but these have now been limited by regulation. See Steven Schneider, Regulations Address Foreign Tax Credit Generator Structures, at http://www.taxlawroundup.com/2011/07/regulations-address-foreign-tax-credit-generator-transactions/.

[11] A per country limit was used in the past at various times, but because it did not have look-through rules, holding companies could be used to accomplish the effects of an overall limit. While an overall credit limit has been used for some time, between 1986 and 2004, the credit was applied within nine different baskets.

[12] Scott Luttrel, "Corporate Foreign Tax Credit, 2007," Internal Revenue Service, *Statistics of Income Bulletin*, 2011, at http://www.irs.gov/pub/irs-soi/11cosumbulcorpforeign.pdf. There are two very small baskets for income from countries sanctioned by the United States and income resourced by treaty, which accounted for less than two-tenths of a percent. Prior to 2007 when there were nine baskets, but the only important difference was a separation of the financial services basket, with 19.7% of income, from the general basket.

## Allocation of Deductions

Another feature that may contribute to the generation of excess foreign tax credits is the allocation of overhead and other deductions that are not taken for foreign tax purposes. While many deductions can be traced to a particular source of income, the parent firm's costs for interest, research, and other overhead (e.g. administration) is allocated between domestic and foreign uses for purposes of the foreign tax credit limit. This allocation lowers the amount of foreign source income. Because these reductions in income are not recognized by the foreign jurisdiction, the result could be to generate excess credits, even in countries whose general effective tax rate is actually lower than that of the United States.

These allocations are necessary for determining net income by source. Borrowing is generally done at the parent level. In addition, the interest allocation limits the ability of firms who are in the excess credit position to avoid U.S. tax by borrowing in the United States rather than in low-tax countries where the deduction is less valuable.

The rule, however, has some imperfections. Foreign subsidiaries may also have overhead costs, particularly interest, which are not recognized in income because dividends are received net of deductions. In 2004, a revision that would have allowed elective allocation of worldwide interest, was adopted but did not go into effect immediately. This elective worldwide interest allocation rule has been delayed on several occasions; currently it is scheduled to take place in 2021.

## Title Passage Rule

There is a special rule called the title passage rule (or the inventory sales source exception rule) that allows half of manufacturing export income (and all of sales of inventory) to be sourced as income in the country in which the title passes. Because this title passage can be arranged in foreign countries, this income is foreign source income and thus eligible for cross-crediting. This provision is effectively an export subsidy for firms with excess foreign tax credits. The title passage rule is important in considering a territorial tax because cross-crediting, at least for active income, would, in theory, disappear. Export income, as well as royalties, would be subject to higher tax rates in some cases with elimination of foreign tax credits.

## Foreign Tax Credit Splitting (Now Restricted)

Prior to 2010, there was also a possibility of claiming foreign tax credits for income that had not actually been subject to tax due to differing rules across countries as to entity status.[13] P.L. 111-226 disallowed any consideration of a foreign tax credit unless the underlying income was reported. Although this provision was estimated to gain relatively little revenue (about $0.4 billion annually),[14] it is hard to be certain how prevalent these activities were. These arrangements

[13] These treatments were referred to as reverse hybrids, and they occurred when, from the U.S. perspective, the subsidiary has its own subsidiary where profits can be deferred, but from the foreign perspective the subsidiary and its own subsidiary are the same firm. The top tier subsidiary thus confronts a foreign tax it is liable for and which could be claimed as a credit even though the income is not reported because it is eligible for deferral. It is the reverse of the check the box arrangement.

[14] This provision was adopted in the P.L. 111-226. See Joint Committee on Taxation, *General Explanation Of Tax Legislation Enacted In The 111th Congress*, JCS-2-11, March 24, 2011, for the revenue estimate for this provision and for several other revisions of the foreign tax credit to address abuses. See also CRS Report R40623, *Tax Havens: International Tax Avoidance and Evasion*, by Jane G. Gravelle.

may affect the data currently available by increasing the ability of firms to offset, for example, royalties with excess credits.

# The Magnitude and Distribution of Foreign Source Income and Taxes, Actual and Potential

Before discussing the issues and consequences of reforms, it is useful to get a "lay of the land." How important are the various sources of foreign income, how much tax do they generate currently, and how much might they generate with various reforms? Because individual tax return data are not available, this issue can only be explored by combining aggregate data available and various analyses that have been done by researchers with access to tax returns. This section discusses the current sources of foreign income, the potential magnitude of foreign income not reported, the sources of tax liability, and the potential size of foregone taxes due to deferral and cross-crediting.

## Current Sources of Realized Foreign Income

**Table 1** shows the distribution of foreign source income by type for firms claiming and receiving foreign tax credits for 2007 and 2008, to the extent that sources can be identified. This data set should capture most of foreign source income reported by U.S. multinationals on their tax return (i.e., not deferred). (Although some data are available for 2009, these data may be skewed because of the economic slowdown that spread abroad). Total foreign source net income was $392.5 billion in 2007 and $413.4 billion in 2008. In the data, oil and gas extraction income is reported separately, so that dividends do not include that income.

**Table 1. Distribution of Foreign Source Income Realized in the United States by Type, 2007 and 2008**

| Type of Income | Share of Taxable Income, 2007 (%) | Share of Taxable Income, 2008 (%) |
|---|---|---|
| Dividend Payments | 19.2 | 22.2 |
| Includable Income (Subpart F) | 16.6 | 16.5 |
| Deemed Taxes (Gross Up) | 12.9 | 16.9 |
| Export Income | 3.7 | 3.5 |
| Royalties, and License Payments (Gross) | 26.0 | 25.7 |
| IC-DISC | 2.3 | 0.0 |
| Other | 19.4 | 15.2 |

**Source**: Statistics of Income, International Statistics, Returns With Foreign Tax Credits, http://www.irs.gov/taxstats/bustaxstats/article/0,,id=210069,00.html; Royalties and License Payments adjusted to eliminate rents based on data from Bureau of Economic Analysis, Trade in Services, 1999-2010, http://www.bea.gov/scb/pdf/2011/07%20July/0711_itaq-tables.pdf. Foreign taxes withheld as reported in the IRS data are added to royalties. Total taxable income for royalties from the Commerce Department data was increased by withholding taxes of approximately $4 billion.

**Notes**: Newly provided data for 2008 and 2009 separate the deemed tax gross up; for 2008, 73% of these taxes were associated with dividend payments and the remainder with Subpart F. See Internal Revenue Service http://www.irs.gov/pub/irs-soi/08colinecount.pdf.

Note that the third item in the table is related to the first two. Because dividends and Subpart F income are on an after-tax basis, the dividends must be increased by the taxes paid for corporate taxpayers electing a foreign tax credit. Most of the deemed paid taxes are probably associated with dividend payments (73% for 2008 when data first because available)[15] because Subpart F income is usually subject to lower foreign taxes. Accordingly, the data suggest an estimate of 30% to 35% of foreign source income that arises from these dividends.

The table also shows that royalties are significant parts of foreign source income, accounting for about a quarter of foreign source income, suggesting that the consequences of changes in the law for this income might be significant.

In **Table 1**, the measure of net income was income net of all deductions (but before adjustments). Some of these deductions were overhead costs that are allocated based on formulas. In **Table 2**, shares are calculated based on income before these allocated deductions. With this approach, it is also possible to calculate the share of interest income and oil and gas extraction income. In **Table 2**, foreign source income before non-allocable deductions is $615.4 billion in 2007 and $614.6 billion in 2008. Non-allocable deductions accounted for 36% of this income in 2007 and 33% in 2008.

**Table 2. Distribution of Realized Foreign Source Income Before Non-Allocable Deductions, 2007 and 2008**

| Type of Income | Share of Taxable Income, 2007 (%) | Share of Taxable Income, 2008 (%) |
|---|---|---|
| Dividend Payments | 12.2 | 14.9 |
| Includable Income (Subpart F) | 8.3 | 11.1 |
| Deemed Taxes (Gross Up) | 10.6 | 11.4 |
| Export Income | 2.3 | 2.3 |
| Royalties, and License Payments (Gross) | 16.6 | 17.3 |
| IC-DISC | 1.4 | 0.0 |
| Oil and Gas Extraction Income | 10.2 | 15.9 |
| Service Income | 2.8 | 3.2 |
| Interest | 21.3 | 18.4 |
| Other (rents, other branch income) | 14.3 | 5.3 |

**Source**: Statistics of Income, International Statistics, Returns With Foreign Tax Credits, http://www.irs.gov/taxstats/bustaxstats/article/0,,id=210069,00.html; Royalties and License Payments adjusted to eliminate rents based on data from Bureau of Economic Analysis, Trade in Services, 1999-2010, http://www.bea.gov/scb/pdf/2011/07%20July/0711_itaq-tables.pdf. Foreign taxes withheld as reported in the IRS data are added to royalties. Total taxable income for royalties from the Commerce Department data was increased by withholding taxes of approximately $4 billion.

**Notes**: Newly provided data for 2008 and 2009 separate the deemed tax gross up; for 2008, 73% of these taxes were associated with dividend payments and the remainder with Subpart F. See Internal Revenue Service http://www.irs.gov/pub/irs-soi/08colinecount.pdf.

[15] See Internal Revenue Service http://www.irs.gov/pub/irs-soi/08colinecount.pdf.

Dividend payments and their related tax gross ups are smaller as a share (25% to 30%) when pre-tax income is considered. Their true importance probably lies somewhere between the shares in **Table 1** and **Table 2** given the imperfections in allocation rules. Note however, that oil and gas extraction income can arise from a subsidiary and is simply reported separately. Including oil and gas income in dividends would bring the totals back up toward 35% to 40% of income. Oil and gas extraction income, however, has little or no reason not to be repatriated because the taxes due on these earnings are generally larger than the U.S. tax (which is why they are treated separately in a way that effectively results in a separate basket). **Table 2** also shows the importance of interest income in the totals for foreign source income (although a full measure of the importance of interest would require information on income of financial institutions through branches).

## Deferred Income

**Table 1** and **Table 2** report realized income (direct, repatriated, branch, and Subpart F). Total foreign source income also includes deferred income. How large is this deferred income on an annual basis? Estimates in this section indicate that close to half of foreign source income is subject to U.S. tax, but less than a quarter of active income of foreign subsidiaries of U.S. firms that can be deferred is currently repatriated.

There are no precise data sources to estimate this effect. Based on IRS statistics for controlled foreign corporations, available for 2008, which accounted for $177 billion of distributions out of pre-tax income to U.S. parents (about 78% of the total distributions), total deemed and distributed income was 27% of total pre-tax income. Subpart F income was 12.1% of pre tax income and dividends were 14.7%.[16] As a share of after tax income, dividends were 18.1% of income and Subpart F 14.3% income, for a total of 32.4%. These ratios might be somewhat understated because of the possibility of non-U.S. shareholders, but that is likely to be unimportant.

Commerce Department data (Table 6.16D: Corporate Profits by Industry) reports $511 billion and $582 billion of rest of world corporate profits in 2007 and 2008, on an after-tax basis.[17] Considering distributions after foreign tax in 2007, the ratios are 14.7% for dividends and 12.7% for Subpart F income, for a total of 27.4%. These ratios are 15.7% for dividends, 12.0% for Subpart F, and 27.8% for the total for 2008.

These numbers do not capture deemed taxes. Using IRS data on controlled foreign corporations and based on the ratios of deemed taxes to distributions in **Table 1** (with 73% of deemed taxes associated with active dividends), the share of pre-tax profits including taxes for 2008 was 19.7% for dividends and 14.7% for Subpart F. Because Subpart F is not voluntary, the share of dividends out of pre-tax profits net of Subpart F income is 23%.

A study of the new M-3 form that reconciles tax and book income finds that for firms with positive taxable and book income, 9% of the foreign source income is actively paid as a dividend and 47% is subject to U.S. tax (including royalties and other direct). Dividends as a share of total income are 19%, the same share as in **Table 1**. The ratios would be similar to those above if deemed taxes were included.

[16] Internal Revenue Service, Statistics of Income, Controlled Foreign Corporations, at http://www.irs.gov/taxstats/bustaxstats/article/0,,id=96282,00.html. Firms represented in these statistics have a 50% ownership or more.

[17] Department of Commerce, Bureau of Economic Analysis, Table 6.16D, at http://www.bea.gov/international/di1usdop.ht.m.

Overall, it appears that close to half of foreign source income is reported as taxable income in the United States, but less than a quarter of the income over which firms have discretion, active income of foreign subsidiaries, is subject to U.S. tax. Rates of deferral vary significantly by location. For 2008, in the aggregate 33% of after tax income of controlled foreign corporations was distributed, 18% as discretionary dividends and the remaining 15% as Subpart F income. Canadian subsidiaries, however, distributed 44%, with 36% as discretionary payments and the remaining 8% as Subpart F. However, for Switzerland, a significant tax haven country, 19% was paid out, 10% as dividends and the remaining 9% as Subpart F. These shares are not available for 2007, and 2006 is probably not very representative, at least for tax haven countries, because it was immediately after the repatriation holiday enacted in 2004 that permitted a one-time dividend payment with an 85% exclusion.[18]

In determining the consequences of present and proposed systems, it is also important to note the repatriated income is not random. Firms presumably choose to repatriate income that can be most easily shielded by foreign tax credits. Some evidence of this effect can be found in the M-3 study, in which the residual U.S. tax on foreign source income was only 3.3% even though half of income was reported and a significant share was in royalties that had little foreign tax (to be used for credits) attached.

## Sources of Tax Liability

To examine this issue, consider the data in **Table 3** on foreign tax credits, which indicate the foreign taxes paid, and credits claimed.

**Table 3. Foreign Tax Payments and Credits, 2007 and 2008**

| Item | 2007 ($ billions) | 2008 ($ billions) |
|---|---|---|
| Current Foreign Taxes Paid | 99.1 | 156.2 |
| Minus Reduction (Largely for Oil and Gas Taxes) | 10.3 | 14.7 |
| Plus Carryover | 29.2 | 49.7 |
| Equals Total Foreign Tax Credits Available | 117.9 | 191.2 |
| Foreign Tax Credit Limit | 114.0 | 122.5 |
| Foreign Tax Credits Claimed | 86.5 | 100.4 |
| Residual U.S. Tax (Limit Minus Claim) | 29.5 | 22.1 |

**Source**: Statistics of Income, International Statistics, Returns With Foreign Tax Credits, http://www.irs.gov/taxstats/bustaxstats/article/0,,id=210069,00.html.

Even though a significant share of the income was royalties and other direct income that should have been taxed, the effective U.S. residual tax rate on foreign source income as measured for tax purposes was only 7% in 2007 and 5% in 2008.[19] Moreover, the size of the tax suggests that royalties were being shielded from tax by excess credits. The royalties were $101.9 billion and $106.4 billion. Had they been fully subject to a 35% tax rate the tax on this source of income

[18] For 2006 total payments were 25% with 12% as discretionary dividends. The data for Canada were similar, but in Switzerland 16% was paid out in total but only 3% as dividends.

[19] Residual U.S. tax in **Table 3** divided by net income from statistics reported in **Table 1**.

(offset by approximately $4 billion in withholding taxes) would have been around $32 billion and $33 billion respectively, larger than total taxes paid.

The indication that royalties are shielded from tax is reinforced by evidence from 2000 tax returns, which traced the $12.7 billion of U.S. residual taxes to foreign sources.[20] **Table 4** shows the distribution of the shares paid. In 2000, there were nine foreign tax credit limit baskets. Only three accounted for a significant share: passive (4.6% of the total), financial services (21.3% of total), and the residual general limit basket (71.3% of the total).[21] Active dividends in the general basket accounted for only 10.2% of total taxes and dividends in financial services accounted for 2.4%. The largest share was due to royalties, interest, and branch income in the active basket. Financial branch income and financial interest each accounted for 18% so that the financial income basket bore a share of taxes out of proportion to its share of income, presumably in part because interest income was subject to tax. The remainder, 16.5% was due to the passive basket, which was largely composed of Subpart F income.

**Table 4. Estimated Sources of Tax Revenue on Foreign Source Income, 2000**

| Type of Income | Share of Taxes Paid (%) |
|---|---|
| Dividends Non-Financial Services | 10.2 |
| Dividends Financial Services | 2.4 |
| Active Royalties, Interest and Export (Non-Financial) | 33.9 |
| Financial, Branch Income | 18.1 |
| Financial, Interest | 18.1 |
| Passive (Largely Subpart F) | 16.5 |

**Source**: Harry Grubert and Rosanne Altshuler, "Corporate Taxes in the World Economy: Reforming the Taxation of Cross-border Income," in *Fundamental Tax Reform: Issues, Choices, and Implications*, Ed. John W. Diamond and George R. Zodrow, Cambridge, MIT Press, 2008, pp. 326-327.

If current taxes were distributed in the same manner now as they were in 2000, then taxes on active dividends for 2007 would have been responsible for a residual U.S. tax of around one-half of 1% on total foreign source active income potentially paid out as dividends.[22] The combination of selective deferral and cross-crediting appears to have essentially eliminated any U.S. tax on active income of foreign subsidiaries.

The same study that estimated data for **Table 4** estimated that two-thirds of royalties were shielded by tax credits. It is possible, however, that more tax is collected on royalties currently because of the declines in foreign tax rates and the elimination of foreign tax credit splitting.

[20] Harry Grubert and Rosanne Altshuler, "Corporate Taxes in the World Economy: Reforming the Taxation of Cross-border Income," in John W. Diamond and George R. Zodrow, eds., *Fundamental Tax Reform: Issues, Choices, and Implications* (Cambridge: MIT Press, 2008).

[21] Data on distribution by basket from Scott Luttrell, Corporate Foreign Tax Credit, 2000, Internal Revenue Service, *Statistics of Income*, at http://www.irs.gov/pub/irs-soi/00cftcar.pdf.

[22] Pre-tax income would range from $112 billion for 2007 to $142 billion for 2008 (with deemed tax apportioned 73% on active dividends. 12.6% of the total tax in **Table 3** would result in $3.7 billion in 2007 and $2.8 billion in 2008, for an effective tax rate of 3.3% and 1.6% on dividends received. However, estimates above indicate that only about 23% of dividends are paid out, so that these tax rates need to be multiplied by 0.23, yielding rates of 0.36% to 0.76%.

## Current and Potential Tax Collections

To consider a year that should be more normal (i.e., past the effects of a slow recovery from the recession) **Table 5** estimates three components of potential foreign taxes for FY2014: foreign taxes projected to be collected, additional taxes collected as a result of the repeal of deferral, and additional taxes collected if, in addition to repealing deferral, a per country foreign tax credit were imposed. Those provisions taken together should result in a close approximation of a true worldwide system that eliminated deferral and largely eliminates cross-crediting.

**Table 5. Current and Potential Tax Collections on Foreign Source Income, FY2014**

| Provision | Effect on Revenues ($billions) | Share of Current Total U.S. Corporate Tax (%) |
|---|---|---|
| Current Tax | 32.1 | 7.5 |
| Gain from Ending Deferral | 18.4 | 4.3 |
| Additional Gain from Per Country Foreign Tax Credit Limit | 45.9 | 10.9 |
| Total Share of All | 96.4 | 22.5 |
| Addendum: Eliminate Title Passage Rule | 6.3 | 1.6 |
| Addendum: Repeal Worldwide Interest Allocation | 3.6 | 0.8 |

**Source**: Current Tax extrapolated from 2007 data based on changes in corporate tax revenues. Gain from Ending Deferral and Title Passage Rule from Joint Committee on Taxation, *Estimates Of Federal Tax Expenditures For Fiscal Years 2011-2015*, January 17, 2012, JCS-1-12. Gain from Per Country Foreign Tax Credit Limit from Joint Committee on Taxation estimates at http://wyden.senate.gov/imo/media/doc/Score.pdf; Worldwide interest allocation based on FY2019 cost adjusted to FY2014 based on projected corporate tax revenues; FY2019 cost at Joint Committee on Taxation, *General Explanation Of Tax Legislation Enacted In The 111th Congress*, JCS-2-11, March 24, 2011.

This table shows the importance of cross-crediting, by showing the effects of moving to a per country foreign tax credit limit given deferral is eliminated. Because of this importance, a territorial tax, which would eliminate foreign tax credits, can have consequences beyond the active income it is designed to remove from the U.S. tax base, since excess credits currently shield royalty and export income from U.S. tax.

**Table 5** also shows the separate revenue consequences of two other provisions: the title passage rule and the effect of worldwide allocation of foreign source income.

# Issues in Considering Territorial Taxation

Several issues arise when considering moving from the present hybrid tax system to a territorial tax: the effect on repatriations, the effect on the location of real investment, the consequences for artificial profit shifting, transition, administrative and compliance issues, and the revenue consequences.

## Effect on Repatriations

One criticism of the current system is that while collecting very little revenue from foreign subsidiaries, it nevertheless discourages repatriations. The negative effect of the current system on repatriations is the major economic rationale cited by the Ways and Means Committee's press release proposing a territorial tax.[23] This argument also ties the lower repatriation rates to less investment and fewer jobs in the United States.

Before discussing the potential effects, however, note that the repatriation argument alone is not a sufficient justification for a territorial tax. The tax effect on repatriation could be eliminated by moving in the opposite direction, ending deferral. Or it could be achieved by a variety of hybrid approaches such as taxing a fixed share of profits currently and exempting the remainder, or allowing an exemption combined with a minimum tax that is smaller than the U.S. tax rate. All of these approaches create a system where taxation is not triggered by repatriation.

Would the elimination of the tax triggered by repatriations (which could be achieved by either a territorial tax or elimination of deferral) increase repatriations significantly? And if so, would those increased repatriations result in more investment and jobs in the United States?

Although the projections vary with data source and with shares of pre-tax and after-tax income, estimates in the previous section suggest that about a third of foreign subsidiaries' earnings was repatriated, with discretionary distributions net of Subpart F income around 23%. Does that imply that the remaining two thirds of income (or 77% of income net of Subpart F distributions) would be repatriated? It is unlikely that much of an increase would occur, as discussed below, and even more unlikely that it those repatriations would be translated into investment.

Several considerations suggest that the increase in repatriations would be limited. First, regardless of tax considerations, much of foreign source earnings would be retained abroad to be reinvested in the enterprises there. Historical evidence on corporate rates of return and growth rates in the United States suggest that about 60% of nominal income is typically retained to maintain the real capital stock and allow it to grow normally at a steady state.[24] The remainder, 40%, would be distributed. Thus we might expect, using the estimates above, at best to see an increase of 7% of earnings, or 17% of earnings net of Subpart F income.

Second, these repatriation rates are probably at an unusually low level because they followed the large one time repatriation (generally in 2005) from the temporary repatriation holiday enacted in 2004. Not only had large sums been repatriated to take advantage of a one time tax exemption which reduced the need for repatriations immediately after the holiday, but more might have been retained abroad than usual in anticipation of another holiday.[25] Historical data indicate that

[23]Camp Releases International Tax Reform Discussion Draft , October 26, 2011, at http://waysandmeans.house.gov/News/DocumentSingle.aspx?DocumentID=266168.

[24] If the rate of return were 10%, the steady state nominal growth rate were 6% (a typical value reflecting a real growth rate of 3% and an inflation rate of 3%), then the remainder would be paid out as a 4% dividend yield. These are typical historical values in the United States. Thus, in a steady state growth model with these values, 60% of nominal earnings would be retained in any case (and would be retained if taxes did matter), and 40% paid out.

[25] See CRS Report R40178, *Tax Cuts on Repatriation Earnings as Economic Stimulus: An Economic Analysis*, by Donald J. Marples and Jane G. Gravelle. Another repatriation holiday was voted on in the Senate in 2009, but not adopted.

repatriation rates fell towards the end of the 1990s and continued to be low from 2000 to 2008.[26] Data were provided every other year and did not include 2005, the year most repatriations occurred under the repatriation holiday. Over the period 1968-2008, the average repatriation rate was 40%; for 2000-2008 it was 20%. In addition to the anticipation and aftermath of repatriation holidays, the growth of high-tech and dot.com firms that were expanding rapidly and not initially paying dividends may also have affected these payout ratios.[27] The evidence from tax data is also consistent with studies examining repatriation rates over an earlier period of time using financial data that found rates of around 40%.[28] Since a 40% rate is about the rate that might be expected in a no-tax world, these results suggest that the repatriation tax has had relatively little effect on a permanent basis. If firms came to believe another repatriation holiday or territorial tax were not in store, and the high-tech industries achieved a steady state growth, repatriation rates might rise to more normal levels.

Third, there is direct evidence that shifting to a territorial tax would not have large effects. Some initial evidence indicates that the Japanese shift to a territorial tax increased repatriations in the first year by about 20%.[29] Applied to current realizations rates, it would increase realizations by about 4% of total earnings; compared to the 40% rate it would increase realizations by about 8% of earnings. Since a larger first year effect might be expected, as pent up earnings are returned, such an increase is quite modest. Preliminary results from a study of the UK territorial tax shift, while subject to revision, suggest an increase of 6% of earnings.[30] A statistical study of U.S. affiliates in different countries facing different taxes suggested that repatriations would increase by about 13%, which would be 2.5% to 5% of earnings.[31]

Moreover, some theory and research suggests the effects would be negligible on a permanent basis. Theoretical considerations indicate that the repatriation tax should not matter because firms will eventually have to repatriate earnings. This theory, referred to as the "new view" is related to a similar theory about why domestic firms pay dividends to their individual shareholders even though it triggers a dividend tax. In both cases, the idea is that eventually shareholders will want to receive their dividends in excess of amounts needed for steady state reinvestment and dividends will be paid either currently, or in the future with interest. In either case, the same present value of tax will occur. While this "new view" for dividends paid in the U.S. to its individual shareholders could be rejected on the grounds that firms can return cash to the

[26] Data from 1992 to 2008 were from Internal Revenue Service Statistics of Income, Data on Controlled Foreign Corporations, http://www.irs.gov/taxstats/bustaxstats/article/0,,id=97151,00.html. Data from 1968-1992 reported in James R. Hines, Jr., The Case Against Deferral: A Deferential Consideration, *National Tax Journal* ,Vol. 52, September 1999, pp. 385-404.

[27] The evidence does not support the idea that the fall in repatriations was due to check-the-box, which was first announced at the beginning of 1997. Subpart F income did not begin to decline as a share of income until 2004.

[28] Mehir A. Desai, C. Fritz Foley, and James R. Hines, Jr., Dividend Policy Inside the Multinational Firm, *Financial Management*, March 22, 2007, at http://www.thefreelibrary.com/Dividend+policy+inside+the+multinational+firm.-a0167305683.

[29] Testimony of Mr. Gary M. Thomas Before the Committee on Ways & Means, U.S. House of Representatives, Hearing on How Other Countries Have Used Tax Reform To Help Their Companies Compete in the Global Market and Create Jobs, May 24, 2011, at http://www.whitecase.com/files/Uploads/Documents/GThomas-HWM-Testimony-24May2011.pdf.

[30] Peter Egger, Valeria Merlo, Martin Ruf, and Georg Wamser, *The Consequences of the new UK Tax Exemption System: Evidence from Micro-level Data*, Working Paper, January 26, 2012.

[31] Mehir A. Desai, C. Fritz Foley, and James R. Hines, Jr., "Repatriation Taxes and Dividend Distortions," *National Tax Journal*, Vol. 54, December 2001, pp. 829-851.

economy by repurchasing shares, such an option is not available for dividend payments between a multinational affiliate and its parent.

If the theory correctly describes behavior, then one would expect that, regardless of the repatriation tax a similar share of earnings would be paid in dividends with or without a repatriation tax. A large empirical literature has developed to study repatriation behavior, finding a variety of results. For example, some early evidence suggested that repatriation rates are sensitive to tax, but subsequent research showed that it might be due to transitory effects.[32] Evidence that repatriations were more likely from highly taxed subsidiaries (where taxes generated would be offset by foreign tax credits) relative to low taxed ones suggested that taxes have effects on repatriations.[33] However, another study found that the repatriations tax became less important given alternative strategies for returning cash for the United States.[34] These strategies included making passive investments abroad with the parent company borrowing against them, or having low tax subsidiaries make equity investments in high tax subsidiaries which in turn repatriated income with attached foreign tax credits.[35] These strategies would indicate differential repatriation rates exist between high and low tax subsidiaries but they are not necessarily meaningful. Most recently, a study suggested taxes had some effect, but a limited one, on repatriations; this study also showed over a long period of time payout shares of about 40%.[36]

The recent pressure for a repatriation holiday and reports of large amounts of accumulated unrepatriated earnings probably comes largely from firms that have intangible assets, have been growing rapidly abroad and thus retaining earnings for that purpose, and perhaps shifting profits arbitrarily.[37] They may have also been delaying repatriations in anticipation of another holiday. As affairs settle into more of a steady state, there may be a greater need to distribute to pay shareholders, so this phenomenon may be largely transitory.

Even if repatriations increase under a permanent territorial tax, those repatriations may not result in additional investment, but are likely to be paid out as dividends, or substitute for borrowing by the parent company.[38] Job creation is not the primary focus here in any case, as in the long run,

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[32] See Rosanne Altshuler, T. Scott Newlon, and William C. Randolph, "Do Repatriations Matter? Evidence from Tax Returns of Multinationals," in *The Effects of Taxation on Multinational Corporations*, Ed. by Martin Feldstein, James r. HInes, Jr. and R. Glenn Hubbard, Chicago: University of Chicago Press, 1995, pp. 253-277.

[33] Mehir A. Desai, C. Fritz Foley, and James R. Hines, Jr., "Repatriation Taxes and Dividend Distortions," *National Tax Journal*, Vol. 54, December 2001, pp. 829-851.

[34] Rosanne Altshuler and Harry Grubert, "Repatriation Taxes, Repatriation Strategies and Multinational Financial Policy, *Journal of Public Economics*, Vol 87, 2002, pp. 73-107.

[35] Some methods of returning cash to the United States involve corporate reorganizations. See Jesse Drucker, "Dodging Repatriation Tax Lets Companies Bring Home Cash," Bloomberg, December 29, 2010, http://www.bloomberg.com/news/2010-12-29/dodging-repatriation-tax-lets-u-s-companies-bring-home-cash.html. For an in depth discussion of methods, see Hal Hicks and David J. Sotos, "The Empire Strikes Back (Again) – The Killer Bs, Deadly Ds and Sec. 367 As The Death Star Against Repatriation Rebels,". *International Tax Journal*, May-June 2008, pp. 37-58. The Internal Revenue Service has periodically attempted to address various methods of repatriating cash without paying tax, most recently in July 2012. See Richard Rubin, "IRS Ends Deals That Let Companies Avoid Repatriation Tax," Bloomberg, July 13, 2011, at http://www.bloomberg.com/news/2012-07-13/irs-ends-deals-that-let-companies-avoid-repatriation-tax.html.

[36] Mehir A. Desai, C. Fritz Foley, and James R. Hines, Jr., Dividend Policy Inside the Multinational Firm, *Financial Management*, March 22, 2007, at http://www.thefreelibrary.com/Dividend+policy+inside+the+multinational+firm.-a0167305683.

[37] CRS Report R40178, *Tax Cuts on Repatriation Earnings as Economic Stimulus: An Economic Analysis*, by Donald J. Marples and Jane G. Gravelle.

[38] The repatriations under the repatriation holiday, enacted on the basis of increasing investment, were largely used to (continued...)

reduce jobs. The economy will tend to create jobs naturally. As an illustration, consider that in 1961 and in 1991 the unemployment rate was the same, 6.7%. Employment, however, rose from 66 million to 117 million, as the economy accommodated the baby boom and the entry of women into the labor force. Permanent provisions that encourage capital to move abroad can change the types of jobs and reduce wages, but not overall employment.[39]

## Location of Investment

Historically, the central issue in evaluating a foreign tax regime has been the effect on the allocation of investment. Economic theory seeking efficiency objectives supports taxing investments at the same rate wherever they are invested; this approach would maximize worldwide output by investing capital where it earns the highest pre-tax return. For example, if the after tax return is 7% and the U.S. tax is an effective 30% while the foreign tax rate is zero, and investments are perfect substitutes, the total pre-tax return at the margin on an investment in the United States is 10% (0.07/(1-0.30) while the return in the foreign location is only 7%. Allowing foreign source income to be exempt causes capital to move to a less productive use, where it earns a pre-tax return of 7%, when it could earn a 10% return in the United States.[40]

The equating of taxes on a firm's investment is most closely associated with a residence based tax system. Given the need for limits on foreign tax credits, this system would be most closely approximated by a system that eliminates deferral and imposes a foreign tax credit limit on a country by country basis. If the objective were not worldwide optimization or efficiency, but maximizing U.S. welfare, the rules would be more stringent by allowing foreign taxes as a deduction rather than a credit.[41]

### Assessing Arguments for A Territorial Tax

What, then, is the justification for moving in the opposite direction, to a territorial tax? One may be that if, for political or other reasons, it is not possible to move closer to a residence-based system, it is possible to design a territorial tax system that is an improvement over the current rules. This argument is made by Grubert and Mutti,[42] and their proposal was incorporated in President Bush's Advisory Commission's tax reform proposals.[43] Grubert and Mutti proposed, along with exempting active dividends from tax, to provide for an allocation of overhead costs of

(...continued)

repurchase shares, the equivalent of paying dividends. See CRS Report R40178, *Tax Cuts on Repatriation Earnings as Economic Stimulus: An Economic Analysis*, by Donald J. Marples and Jane G. Gravelle, for a review of the evidence.

[39] Using repatriations to increase employment in an underemployed economy in the short run are unlikely to be effective because transferring foreign earnings into U.S. dollars is contractionary and likely overwhelms any direct spending effects. See CRS Report R40178, *Tax Cuts on Repatriation Earnings as Economic Stimulus: An Economic Analysis*, by Donald J. Marples and Jane G. Gravelle.

[40] Note that economic analysis has focused on efficient allocation of investment, rather than the effects on jobs because in the long run (the focus of a permanent tax law), an economy will tend to naturally create jobs.

[41] The issues discussed in this section are discussed in more detail in CRS Report RL34115, *Reform of U.S. International Taxation: Alternatives*, by Jane G. Gravelle.

[42] Harry Grubert and John Mutti, Taxing *International Business Income: Dividend Exemption Versus the Current System*," Washington, DC, The AEI Press, 2001.

[43] The President's Advisory Panel on Federal Tax Reform, *Simple, Fair and Pro-Growth: Proposals to Fix America's Tax System*, November, 2005, at http://govinfo.library.unt.edu/taxreformpanel/.

the firm (such as interest) between taxable and tax exempt income. For example, if 10% of income is exempt because of the dividend exemption then 10% of interest and other overhead costs would be disallowed. They also note that that the elimination of foreign tax credits would mean that royalty, export and other income would not be shielded from U.S. tax with excess foreign tax credits. As a result, this proposal is projected to raise revenue, a result also found by the Joint Committee on Taxation, and the overall tax rate on foreign source income would rise.[44] Grubert and Mutti also note that repatriations would not trigger a tax and that such a change would reduce the cost of tax planning to avoid the repatriation tax.

The argument that a territorial tax that could improve economic efficiency, or at least make it no worse, should be distinguished from arguments that do not stand up to economic reasoning. For example, moving to a territorial system because other countries have generally done so does not mean such a system is desirable either for them or for the United States. Many policies exist in other countries, such as a value added tax or national health insurance, policies that many oppose and that have not been adopted in the United States. The issues may differ as well. European countries, for example, are geographically and politically closer than the United States is to other countries. The European Union also has provisions on freedom of capital movement and establishment that prevent the type of anti-inversion laws that the United States has, to prevent U.S. firms from relocating their headquarters.[45] These rules may influence decisions to adopt territorial systems as well as decisions to lower corporate tax rates, which has occurred in the United Kingdom recently.

Similarly, the argument that because most other countries do not tax their foreign subsidiaries, the United States also should not do so in order to allow its firms to compete abroad does not stand up to economic analysis. A country does not compete in the manner that a firm does, because its resources (labor and savings provided by its citizens) do not disappear if another firm undercuts prices; they are simply used in a different way. That is, a country does not compete with the rest of the world, it trades with them, both its products and its capital. It can generally be shown that the United States would still be better off, or at least no worse off, if it taxes foreign and domestic investments by its firms at the same rate, even if other countries do not.[46]

Finally, arguments made based on empirical studies that indicate that increased foreign investment of multinationals is correlated with more, not less, domestic investment do not show that overall U.S investment is not reduced by more favorable foreign treatment, and may simply identify firms that are growing. In any event, the aggregate amount of capital owned by U.S. citizens and the allocation of that capital are separate issues. Even if savings responds to the overall U.S. tax burden, of two revenue neutral regimes, the one that taxes capital equally in both locations would be more efficient.

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[44] The proposal is estimated to raise revenues by $6.9 billion in FY2014. See Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options*, March, 2011, p. 187, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/120xx/doc12085/03-10-reducingthedeficit.pdf.

[45] Countries can adopt anti-abuse provisions that are more limited. See Marco Rossi, "European Commission Blesses Italy's Anti-Inversion Rules," at http://www.euitalianinternationaltax.com/2011/05/articles/european-commission-blesses-italys-antiinversion-rules/.

[46] See Jane G. Gravelle, Does the Concept of Competitiveness Have Meaning in Formulating Corporate Tax Policy? November 2011, forthcoming, *Tax Law Review*, at http://www.americantaxpolicyinstitute.org/pdf/Jane%20Gravelle%20paper.pdf. Critiques of competitiveness arguments were also made, primarily with respect to trade policy, by Paul Krugman, See "Competitiveness: A Dangerous Obsession," *Foreign Affairs*, Vol. 73, No. 2 (March-April, 1994), pp. 28-44. Links to the journal can be found at http://www.foreignaffairs.com/issues/1994/73/4.

There are some arguments that have been made that bear consideration. Perhaps the most important of these is that U.S. firms can change their nationality by moving their headquarters abroad, merging with foreign companies, or incorporating abroad. However, anti-inversion rules adopted in 2004 are likely to prevent large-scale shifting of headquarters of existing firms, while mergers and incorporating abroad are probably largely determined by non-tax factors and could be addressed with legislative revisions.[47] Evidence suggests that very little incorporation of true U.S. firms occurs abroad[48] and this effect could be addressed with legislation (such as basing taxation on where effective management occurs) if necessary.

Arguments have also been made that the higher taxes on returns to capital investments would prevent U.S. firms from exploiting intangible assets abroad.[49] However, there are many ways of exploiting intangibles without engaging directly in manufacturing or other activities, such as licenses, franchises, and contract manufacturing.[50] Products embodying U.S. innovations could also be produced in the United States and exported.

## Likely Effects of International Tax Revision on Investment

What are the likely effects of altering the international tax system on investment? There are several reasons that these effects would probably be modest, although they would depend on the particular design features of the reform.

First, most countries where physical investment might take place, such as manufacturing, tend to have taxes that are not much different from those that apply in the United States: average effective rates of 27% and marginal effective rates of about 20%.[51] The average effective tax rate on foreign subsidiaries of U.S. parents is estimated to be lower than that of U.S. firms in general (about 16% versus 26% with a 3% residual U.S. tax on foreign earnings), but that partially reflects profit shifting to low tax countries, since the effective rate in tax haven countries was 5.7%.[52] Overall effective tax rates abroad for foreign subsidiaries of U.S. companies also vary by

[47] Mergers that involve shifting the location of incorporation do occur occasionally. The announced merger of Eaton Corporation and Cooper Industries is an example of how mergers can be used to shift headquarters although even in this case the stated primary reason was non-tax issues. Cooper was already incorporated in Ireland, but is effectively a U.S. company with management in Houston. See Robert Schoenberger, "Eaton Corporation Plans to Buy Cooper Industries, Move Incorporation to Ireland," *The Plain Dealer*, May 12, 2012. http://www.cleveland.com/business/index.ssf/2012/05/eaton_corp_plans_to_merge_with.html. Aon's shift of incorporation to the U.K. will trigger a shareholder level capital gains tax. See "Aon Shareholders May Pay Hefty Taxes With Headquarters Shifting to London," Ameet Sachdev's Chicago Law, at http://articles.chicagotribune.com/2012-01-20/business/ct-biz-0120-chicago-law-20120120_1_aon-global-aon-corp-tax. Among solutions to limit tax motivated international mergers is imposing a tax on shareholder gain at ordinary rates.

[48] Susan Morse and Eric Allen, "Firm Incorporation Outside the U.S.: No Exodus Yet," December 2011, at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1950760.

[49] This idea is most recently addressed in Mihir Desai and James Hines, "Evaluating International Tax Reform," *National Tax Journal*, Vol. 56, September 2003, pp. 487-502.

[50] See CRS Report RL34115, *Reform of U.S. International Taxation: Alternatives*, by Jane G. Gravelle, for a more detailed discussion of this issue.

[51] See CRS Report R41743, *International Corporate Tax Rate Comparisons and Policy Implications*, by Jane G. Gravelle.

[52] Melissa Costa and Jennifer Gravelle, Taxing Multinational Corporations: Average Tax Rates, Presented at a Conference of the American Tax Policy Center, October 2011, and forthcoming in *Tax Law Review*, at http://www.americantaxpolicyinstitute.org/pdf/Costa-Gravelle%20paper.pdf.

industry. Industries with a lot of intangible assets have lower tax rates. For example, computer and electronic product manufacturing had an effective tax rate of 8.7% and finance 11.3%.[53]

Second, to the extent that firms expect largely to avoid U.S. taxes under the current system, either through permanent reinvestment of profits or tax planning, moving to a territorial tax would not make much difference in inducing outflows of capital, especially if anti-base erosion provisions (such as treating income earned in tax haven countries as Subpart F Income) are adopted. Nevertheless, since firms' investments are only observed under the current deferral and foreign tax credit system, it is possible that significantly more capital would be invested abroad, especially in lower tax jurisdictions.

Moving in the opposite direction, by ending deferral and possibly cross-crediting (with a per country foreign tax credit limit) would reduce capital investment abroad by retaining more outbound capital in the United States.

Nevertheless, effects from either revision are unlikely to be important to the overall U.S. economy or to U.S. welfare; estimates of the effect of cutting the U.S. corporate tax rate by ten percentage points, which would presumably have larger effects by attracting inbound capital as well is estimated to increase U.S. output by only about $2/10^{ths}$ of 1% and U.S. income by $2/100^{ths}$ of 1%.[54] The effects of moving to a territorial tax would be negative (decrease U.S. output) because they increase the return on outbound capital, but would be smaller in magnitude because the effects are smaller. Based on relative sizes of revenue effects, a ten percentage point rate reduction would lose about 29% of corporate revenue, while, based on the estimates in **Table 5**, eliminating all taxes on foreign source income would lose about 7.5% of corporate revenue, or a quarter of the amount. Eliminating deferral alone would gain revenue equal to about 15% of the absolute change from a ten percentage point rate reduction, while eliminating deferral and cross-crediting would be about 53% of the change. This last change could be more significant than the domestic rate reduction but nevertheless not large relative to the U.S. economy.

All of these effects are small, relative to output, for several reasons. First, although capital flows respond to differential tax rates, capital is not perfectly mobile.[55] Even if it were, the large size of the U.S. domestic economy and capital stock and the constraints of production (capital must combine with labor to be productive) limit the effect to ½ of 1% of output and a negligible effect

[53] Charles Duhigg and David Kocieniewski, "How Apples Sidesteps Billions in Taxes," *New York Times*, April 29, 2012, p.1, 20-21. at http://www.nytimes.com/2012/04/29/business/apples-tax-strategy-aims-at-low-tax-states-and-nations.html?pagewanted=all.

[54] See CRS Report R41743, *International Corporate Tax Rate Comparisons and Policy Implications*, by Jane G. Gravelle.

[55] The overall evidence suggests an elasticity of around three which is used in the calculations above; see Jennifer C. Gravelle, Corporate Tax Incidence: Review of General Equilibrium Estimates and Analysis, Working Paper 2010-03, May 2010, at http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/115xx/doc11519/05-2010-working_paper-corp_tax_incidence-review_of_gen_eq_estimates.pdf. See Harry Grubert and Rosanne Altshuler, "Corporate Taxes in the World Economy: Reforming the Taxation of Cross-border Income," in *Fundamental Tax Reform: Issues, Choices, and Implications*, Ed. John W. Diamond and George R. Zodrow, Cambridge, MIT Press, 2008 who reference a number of studies showing that investment by multinationals is sensitive to tax rates. A review is also contained in Michael Smart , Repatriation Taxes and Foreign Direct Investment: Evidence From Tax Treaties, Working Paper, June 20, 2010, at http://www.sbs.ox.ac.uk/centres/tax/symposia/Documents/2010/05%20Smart.pdf; and in Lars Feld and Jost Heckemeyer, "FDI and Taxation: A Meta Study," *Journal of Economic Surveys*, Vol 25, April, 2011, pp.233-272 . The working paper version is at http://www.cesifo-group.de/portal/pls/portal/docs/1/1186528.PDF.

on income.[56] The corporate tax itself is also small as a cost factor: about 2% of GDP. Thus even a 10 percentage point rate reduction would be slightly over ½ of 1% of GDP, while most international revisions would be even smaller. Finally, most of these gains would not accrue to U.S. income: for inbound capital most of the gain would be profit to foreign investors, and for outbound capital drawn back, profits were already in existence and merely change location.

The analysis in this section suggests that while there may be concerns about the effects of international reforms on investments, either reducing U.S. investment in the case of a territorial tax or increasing it by moving towards a residence based tax (e.g., eliminating deferral and cross-crediting) these effects are likely quite modest.

### Treatment of Royalties and Export Income

One effect of the current system that might be changed by moving to a territorial system is the reduction in the beneficial treatment of royalties and export income through the use of excess foreign tax credits. The current benefits for royalties encourage firms to exploit intangibles in foreign operations rather than in the United States, while the export subsidy causes prices and magnitudes of exports to be too large.

Royalties, in particular, are a difficult issue to address because increased taxes on royalties paid from foreign subsidiaries would encourage manufacturing of goods in the United States but, as will be discussed in the next section, also creates an incentive to understate royalties and artificially shift intangible income into untaxed active earnings of foreign subsidiaries that are exempt. Ideally, such profit shifting should be addressed by anti-abuse provisions.

## Artificial Profit Shifting

The third issue, which primarily involves revenue, is artificial profit shifting—that is, shifting profits into low-tax jurisdictions that are then exempt from U.S. tax. Profit shifting also exists under the current system because of deferral. Evidence of profit shifting is clear from the distribution of shares of U.S. subsidiary profits as a percentage of GDP, where profits as a percentage of output were typically less than 1%-2% in the G-7, were significantly larger in the larger tax-haven countries (7.6% in Ireland and 18.2% in Luxemburg), and were more than 600% and 500% respectively in Bermuda and the Cayman Islands.[57] The estimates of magnitude vary substantially reaching up to $90 billion and ranging from about 14% to 29% of corporate revenues.[58] They have been growing as well.[59]

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[56] Estimates from CRS Report R41743, *International Corporate Tax Rate Comparisons and Policy Implications*, by Jane G. Gravelle, based on perfect mobility of capital and perfect product substitution.

[57] CRS Report R40623, *Tax Havens: International Tax Avoidance and Evasion* and CRS Report R41743, *International Corporate Tax Rate Comparisons and Policy Implications*, both by Jane G. Gravelle. Data on earnings and profits of controlled foreign corporations were taken from Lee Mahoney and Randy Miller, Controlled Foreign Corporations 2004, Internal Revenue Service Statistics of Income Bulletin, Summer 2008,http://www.irs.ustreas.gov/pub/irs-soi/04coconfor.pdf. Data on GDP from Central Intelligence Agency, The World Factbook, https://www.cia.gov/library/publications/the-world-factbook. Most GDP data are for 2008 and based on the exchange rate but for some countries earlier years and data based on purchasing power parity were the only data available.

[58] See CRS Report R40623, *Tax Havens: International Tax Avoidance and Evasion* and CRS Report R41743, *International Corporate Tax Rate Comparisons and Policy Implications*, both by Jane G. Gravelle. For the most recent estimates see Kimberly A. Clausing "The Revenue Effects of Multinational Firm Income Shifting *Tax Notes*, March (continued...)

In general, most of this profit shifting apparently arises from either leveraging (borrowing in high-tax jurisdictions) or shifting of the location of profits from intangibles. It is not surprising, therefore, that low-tax rates tend to be associated with manufacture of drugs and electronics, and the information and communications industries.

Profit shifting is a policy problem even without a move to a territorial tax. One of the concerns about moving to a territorial tax is the possibility that it will increase the already significant and growing estimated level of profit shifting. Under current law, firms that have shifted profits to low-tax jurisdictions may still have to face eventual taxation. The considerable lobbying for a repatriation holiday such as that in 2004 may be a sign of this concern.[60] With a simple territorial tax with no anti-abuse provisions, profit shifting could increase substantially. There is little to clarify the likely magnitude of this effect. Evidence for European countries has also indicated significant profit shifting, benefiting most European countries largely at the expense of Germany.[61] Germany has since lowered their corporate tax rate (and profit shifting may have played a role in that decision). However, it is difficult to draw conclusions from the experiences of these very different countries, who already have territorial systems but also have in most cases had measures to address base erosion.

If the new view of dividends is correct, and companies expect to pay taxes on excess profits with interest when deferred, then the move to a simple territorial tax (without any anti-base erosion measures) could increase profit shifting, perhaps considerably. However, if this view is not correct and firms expect to escape tax indefinitely, then going to a territorial tax might not make much difference. Unfortunately, while there is a relatively powerful theoretical justification for the new view, the empirical evidence has been mixed. At the same time, however, as noted above, the lobbying for a repatriation holiday supports the new view and the expectation that profit shifting might increase insignificantly.

One particular potential effect on profit shifting involves royalties. Because royalties are protected to some extent by excess foreign tax credits, moving to a territorial tax would eliminate that protection and increase the tax on royalties. This change in taxation would create a further incentive to shift intangible income into the earnings of foreign subsidiaries and out of royalties.

Aside from the issue of the effect of a territorial tax (and of its particular design features) on profit shifting, other reforms might be considered that might address profit shifting either in the current system or in a system revised in ways other than moving to a territorial tax. These reforms might include provisions reforming the current system proposed by President Obama (and earlier by former Ways and Means Committee Chairman Rangel), which would tax excess earnings from

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28, 2011, pp. 1580-1586, who finds estimates for 2008 from $57 billion to $90 billion and Martin Sullivan, "Transfer Pricing Costs U.S. at Least $28 Billion," *Tax Notes*, March 22, 2010, pp. 1439-1443.

[59] Martin Sullivan, "Transfer Pricing Abuse Is Job-Killing Corporate Welfare," *Tax Notes* August 2, 2010, pp. 461-468.

[60] The lobbying group has apparently ended at least part of their campaign. See "WIN America, Tax Repatriation Holiday Lobby Group, Ends Advocacy Work" Reuters, http://www.huffingtonpost.com/2012/04/23/win-america-tax-repatriation-holiday_n_1447581.html?ref=business. For a report on the repatriation holiday and its issues see CRS Report R40178, *Tax Cuts on Repatriation Earnings as Economic Stimulus: An Economic Analysis*, by Donald J. Marples and Jane G. Gravelle.

[61] Harry Huizinga and Luc Laeven, "International Profit Shifting Within Multinationals: A Multi-Country Perspective," *Journal of Public Economics*, vol. 92. 2008, pp.1164-1182.

intangibles as subpart F income and rules that would disallow some portion of overhead expenses to the extent income is not taxed.

Fundamentally, as long as a system allows for differential taxes, whether between the U.S. and foreign source income or between types of foreign source income, there is likely to be profit shifting. Companies appear willing to exploit relatively small differentials in tax as illustrated by the double-Irish, Dutch sandwich technique that allowed firms to not only avoid the U.S. tax, but to avoid the 12.5% Irish tax as well, and establish taxation in Bermuda, with a zero tax rate.[62] The only tax system that eliminates differential taxes is the elimination of deferral, possibly combined with a separate tax credit limit basket for royalty income.

## Transition

An important issue in moving to a territorial tax is how to treat accumulated unrepatriated earnings, which were generated under a worldwide system. One approach would be to deem all accumulated earnings as repatriated and pay taxes, with a number of years allowed to pay these taxes. The provision might create a hardship for firms to the extent that income is tied up in non-liquid form, unless the period of time for paying the tax were extensive. In addition, it would be a retroactively harsh tax compared with the present system, because a significant portion of earnings need never be repatriated. During normal times, estimates suggest that more than half of retained earnings abroad is probably reinvested in the firms activities. Note also that while perhaps 60% or so of the flow of income would be retained abroad, a much larger share of the stock of unrepatriated earnings would be likely to be permanently reinvested abroad.

Another option is to treat these earnings the same as newly generated earnings and exempt them in the same way. This approach would create a windfall benefit, especially to the degree that firms have been holding off repatriating and engaging in aggressive profit shifting because of a potential tax holiday.

A third option would be to treat dividends as paid out of accumulated earnings until these earnings are exhausted, while applying the full tax rate and foreign tax credit rules. This approach, however, would continue the disincentive to repatriate for some time.

None of these approaches may be entirely satisfactory. Intermediate proposals that are under consideration would tax this income but at a lower rate. One, in the Ways and Means proposal, is to deem all this earnings repatriated prior to the law changes, apply the provisions of the 2004 tax holiday (85% exclusion of income with proportional foreign tax credits), which would impose a small tax, and allow it to be paid over a period of time. On average this may be a reasonable compromise, because, although a significant fraction of income is exempt, a significant fraction of this income would probably never have been repatriated.

A second intermediate option is to allow firms to elect the holiday (with an extended pay out period) and to tax any remaining dividends at the full tax rate until all of the remaining earnings is paid out as dividends. This voluntary approach allows firms to avoid undesirable forced payouts, but prolongs the effective movement to a territorial tax.

[62] Jesse Drucker, "Google 2.4% Rate Shows How $60 Billion Lost to Tax Loopholes," *Bloomberg*, October 21, 2010, at http://www.bloomberg.com/news/2010-10-21/google-2-4-rate-shows-how-60-billion-u-s-revenue-lost-to-tax-loopholes.html.

Striking a balance between limiting the windfall benefits and the associated revenue loss compared with a baseline, providing firms with terms that allow the funds to pay (since a lot of accumulated earnings are not liquid) and avoiding prolonged coverage of dividends under the old system is one of the most difficult problems in crafting a shift to a territorial tax. As will be discussed subsequently, the proposals have included a variety of approaches.

While accumulated untaxed earnings are an important issue, there are other transition issues relating to the shift from the current system to a territorial tax. These include unused foreign tax credits associated with previously taxed income and foreign loss carryovers. How credits and losses might be treated may depend largely on the treatment of existing earnings accumulated abroad and how other features of the foreign tax credit are modified.

## Administration and Compliance

Arguments have often been made that moving to a territorial tax would simplify administration and compliance. Grubert and Mutti, in their proposal for a territorial tax, stressed the cost of tax planning associated with repatriating income while paying minimal tax. Thus a territorial tax would add value by simplifying repatriation policy. U.S. parents could receive dividends from their subsidiaries without concerns about the tax consequences. However, the same simplification would occur if deferral were ended, because firms would have no choice about paying taxes or arranging for optimal cross-crediting. Hybrid approaches such as taxing a share of income currently would also eliminate the scope for tax planning around repatriation.

Although repatriation tax planning would be eliminated, if a territorial tax increased profit shifting incentives, tax planning in that area could increase. And, as will be shown in the discussion of design issues, provisions considered to combat income shifting can add considerable complexity to the tax code.

## Revenue Issues

A shift to a territorial system could potentially gain revenue, in part because relatively little tax is collected on foreign operations. In any case, it is unlikely that large revenue losses would occur unless the move to a territorial tax includes other provisions (such as lower tax rates on royalties) or induces pronounced income shifting responses. If **Table 4** shares of income are applied to estimates of current taxes paid on foreign source income listed in **Table 5**, the taxation of dividends of foreign subsidiaries is quite small, a little over $4 billion in FY2014, or about 1% of corporate revenues. Branch income is slightly under $6 billion, so if this income is also exempted in a move to a territorial tax, the total effect would be about $10 billion. The two together are about 2% of corporate revenues. Taxes on royalties and export income (which along with nonfinancial interest would be somewhat over $10 billion, or about 2% of revenues) could increase with the loss of foreign tax credits, leading to a relatively small net loss or possibly a small gain.

There is considerably more revenue to be gained by moving in the opposite direction, as some proposals do. Eliminating deferral and providing a per country foreign tax credit limit could triple the revenue collected on foreign source income, raising $64 billion or about 15% of corporate taxes, according to the estimates in **Table 5**. Other intermediate changes could raise revenues;

eliminating deferral alone would raise about $18 billion in revenue, and the combination of President Obama's budget proposals for international taxation would raise $16 billion.[63]

Some proposals for moving to a territorial tax aim for revenue neutrality, but also propose to use transitional revenues (from taxes on accumulated untaxed earnings) to achieve this revenue neutrality in the budget horizon. Because transitional gains are temporary, this approach results in a long-run revenue loss.

# Design Issues in a Territorial Tax

Moving to a territorial tax goes far beyond a simple matter of exempting foreign source income from U.S. tax. There are issues of transition, the treatment of current flow through income, and the retention and perhaps revision of anti-abuse rules. In this section, three proposals are outlined: the Grubert Mutti proposal, the discussion draft provided by Ways and Means Committee Chairman, and Senator Enzi's bill, S. 2091. The latter two proposals are similar in general approach. Note that the Grubert Mutti proposal is a general outline, while the Ways and Means Discussion Draft and S. 2091 are in legislative language and are more detailed.

## The Grubert Mutti Proposal

This proposal has been circulating for some time as a general proto-type of a move to a territorial tax, and has been estimated to raise revenue, primarily due to increased taxes on royalties and allocation of parent company expenses between taxable and exempt income.[64] A proposal of this nature was included in President Bush's Advisory Panel Proposal in 2005.[65]

- Exemption of dividends for active foreign income by U.S. shareholders with a 10% or more interest and eliminate foreign tax credits.
- Foreign branches treated the same as subsidiaries.
- Royalties and interest paid to the U.S. parent are taxable.
- Current anti-abuse rules for passive income(Subpart F) would be retained, although some aspects would become obsolete (primarily the inclusion of dividend payments between subsidiaries).
- Parent's overhead expenses, such as interest, would be allocated in proportion to untaxed income and disallowed.
- Active foreign losses could not offset domestic income.
- Capital gains and losses from the sale of productive assets would be exempt.
- Income from U.S. exports would not be classified as foreign source income.

[63] Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2013 Revenue Proposals*, February 2012, http://www.treasury.gov/resource-center/tax-policy/Documents/General-Explanations-FY2013.pdf.

[64] Harry Grubert and John Mutti, Taxing *International Business Income: Dividend Exemption Versus the Current System* (Washington, DC, AEI Press, 2001).

[65] The President's Advisory Panel on Federal Tax Reform, *Simple, Fair and Pro-Growth: Proposals to Fix America's Tax System*, November, 2005, at http://govinfo.library.unt.edu/taxreformpanel/.

The proposal does not address the treatment of existing accumulated earnings abroad or profit shifting via intangible assets, although one of the proposal's authors has indicated that their plan should probably include a tax on accumulated earnings, but at a lower rate.[66]

This proposal has been estimated to raise revenue of approximately $6.9 billion in 2014.[67] If the shares of revenue in **Table 4** remain the same for 2014, about 30% of current tax on foreign source income or slightly under $10 billion (based on aggregates from **Table 5**) is collected on active dividends and branch income. The additional taxes on royalties and export income plus limits on the deduction of overhead expenses presumably raise about $17 billion (replacing the lost revenue and generating additional amounts).

## Ways and Means Chairman Camp's Discussion Draft

In October 2011, Ways and Means Chairman Dave Camp released a discussion draft outlining an approach to a territorial tax (hereafter Discussion Draft). This proposal includes some options and unsettled issues, and there is not as yet a revenue estimate. Note also that the intention expressed in press releases at that time was to couple the move to a territorial tax with a general tax reform that would reduce the top corporate rate from 35% to 25%. This rate matters since some provisions allow a proportional tax benefit. Since the other changes that might be needed to achieve this reduction have not been yet spelled out, no observations on the effects if any remaining revision will be included, outside of noting the consequences of the rate change for specific territorial provisions.

The following summary of these provisions does not include all of the detailed nuances of the proposal, which are contained in a technical draft discussion.[68]

- Allows a 95% deduction for the foreign source portion of dividends for 10% U.S. corporate shareholders of foreign subsidiaries that are controlled foreign corporations (CFCs). A holding period of one year for stock in foreign corporations is required. If the rate is reduced to 25%, dividends would be taxed at 1.25%; at the current rate, they would be taxed at 1.75%. (CFCs are those where 50% of the stock is owned by five or fewer 10% U.S. shareholders.)
- 10% corporate shareholders of non controlled corporations (where 50% of the stock is not owned by five or fewer 10% U.S. shareholders, called 10/50 corporations) can elect the same treatment as CFCs.
- Foreign branches are treated the same as subsidiaries; the draft also considers the possible inclusion of partnerships in this treatment.
- Anti-abuse (Subpart F) provisions are retained, although these rules would be revised in light of the other changes; these details are to be considered subsequently. Dividends paid between CFCs are exempt.

[66] Author's conversation with Harry Grubert, July 2, 2012.

[67] Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options*, March 20, 2011, p. 187. http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/120xx/doc12085/03-10-reducingthedeficit.pdf

[68] Documents, including bill language, technical discussions and shorter summaries can be found at the Ways and Means Committee website at http://waysandmeans.house.gov/taxreform/.

- Capital gains on sales of stock in active eligible subsidiaries are also eligible for a 95% exclusion.
- Accumulated untaxed earnings will be taxed with an 85% exclusion and apportionment of associated foreign tax credits in the same fashion as the 2004 repatriation holiday, except that all earnings will be taxed rather than earnings that are voluntarily repatriated. No actual repatriation is necessary. Firms can pay the tax in installments with interest over eight years. Assuming this provision applies before changes in the statutory tax rate, the effective rate is 5.25% less any apportioned foreign tax credits.
- The foreign tax credits associated with active dividends and with foreign branch income are disallowed (those for Subpart F are retained). All foreign tax credits would be in one basket, presumably because the active basket would no longer be relevant. The proposal also eliminates the allocation of parent interest that presently applies to determine the foreign tax credit limit: only directly associated expenses will be applied to determine foreign income. It would also repeal the provision preventing the splitting of foreign tax credits.
- A provision that requires the inclusion in income of investments of deferred income (income that is not taxed because it is not distributed) in U.S. property is repealed. This provision exists to prevent firms from effectively repatriating earnings without declaring dividends that are subject to the tax.
- Three anti-base-erosion options, two directed at intangible income, are considered. Option A is similar to a proposal made by President Obama in his budget proposals, that would tax excess earnings on intangibles (in excess of 150% of costs) in low tax jurisdictions as Subpart F. The inclusion would be phased out between a 10% and a 15% rate. Option B would tax income that is subject to an effective foreign tax rate below 10% unless it qualifies for a home country exception. The home country exception applies when a firm conducts an active trade or business in the home country, has a fixed place of business, and serves the local market. Option C would tax all foreign income from intangibles (whether earnings by the foreign subsidiary or royalty payments) but allow a deduction for 40%, resulting in a tax rate of 15% at a 25% statutory tax rate.
- Additional base-erosion provisions (sometimes call thin-capitalization rules) relating to interest would restrict the deduction for interest if the company failed to meet either of two tests: if debt to equity ratios in the U.S. differed from the total debt to equity ratio worldwide and if interest expenses exceed a certain share of adjusted income (generally taxable income before the deduction of interest and depreciation). The smaller of the excess interest under either test would be disallowed, but the percentage has not been specified.
- The draft indicates that the two extenders, exception from Subpart F of active financing and active insurance income and the look-through rules, would be considered separately.

## Senator Enzi's Bill (S. 2091)

Senator Enzi has introduced S. 2091 which is similar in many respects to the Ways and Means Discussion Draft. His bill is a separate bill that does not include a general tax reform or lowering of the corporate rate.[69]

- The Enzi proposal provides the same 95% dividend exemption and election option for 10/50 companies as the Discussion Draft.
- Foreign branches would not be treated as subsidiaries.
- Anti-abuse rules (Subpart F) would be retained, but the inclusion of foreign base company sales and service income would be eliminated.
- Capital gains on the sale of stock would be eligible for the exclusion to the extent they would be treated as a dividend under Section 1248 (which treats gains as dividends to the extent of earnings and profits).
- Firms could elect to tax accumulated earnings with a 70% exclusion (a 10.5% tax) and no foreign tax credits; otherwise accumulated earnings would be taxed at full rates with foreign tax credits allowed when paid out as dividends and these pre-existing earnings would be deemed to be paid out first.
- Foreign tax credits (and deductions for these taxes) associated with exempt income would be disallowed.
- The Enzi bill does not repeal the provision taxing investments of deferred income in U.S. property.
- For anti-base-erosion provisions a version of Option B in the Discussion Draft along with a version of the first part of Option C would be included. Income in countries with tax rates of half or less than the U.S. rate (17.5%) would be subject to tax. However, operations that conduct an active business, with employees and officers that contribute substantially, would be excepted except to the extent the income is intangible income of the CFC. The CFC's intangible income would be Subpart F income. These rules provide more scope for exemption as compared to the rules in the Discussion Draft which would require exempt income to carry out activities serving the home country market. The bill also includes the first part of Option C, allowing a 17.5% tax rate on intangible income (such as royalties) earned by a domestic corporation. Intangible income would be placed in a separate foreign tax credit basket.
- The bill does not contain the thin capitalization rules (such as allocating interest between U.S. firms and their foreign subsidiaries).
- The bill makes the two extenders, the exception from Subpart F for active financing and active insurance income and the look-through rules, permanent. It also applies the worldwide interest allocation for purposes of the foreign tax credit in 2013, rather than 2021.

[69] Ernst & Young has provided a summary of this bill, "Senator Enzi Introduces and International Tax Reform Bill," http://www.ey.com/Publication/vwLUAssets/Senator_Enzi_introduces_an_international_tax_reform_bill/$FILE/Senator%20Enzi%20introduces%20reform%20bill.pdf, March 1, 2012.

# Analysis and Commentary on the Proposals

Some insights into issues and trade offs may be noted by observing the difference between these proposals. In addition, the Discussion Draft proposals invited commentary, which has appeared in a number of venues including testimony before a Ways and Means Subcommittee on Select Revenue Measures hearing on November 27, 2011. This section examines the alternative approaches in light of the issues discussed earlier and general design considerations.

## Repatriation Incentives

While the Grubert-Mutti proposal has no tax that is triggered by repatriation, the other two territorial proposals do, due to the 5% "haircut" resulting from the proposed 95% exemption. In addition, the Discussion Draft also allows firms to choose an alternate completely tax free method of repatriation since investment in U.S. assets is not taxed, even at a 5% share. Presumably, the expectation is that the tax due to the 5% inclusion in income (1.25% at a 25% rate and 1.75% tax at a 35% rate) is too small to matter. At least one commentator, however, has singled this issue out as a potentially serious one indicating that as long as tax planning to avoid even a small tax is costless, firms will undertake it.[70] One option for the Discussion Draft, which would not eliminate the small repatriation tax but would eliminate the costless avoidance, would be to continue to tax these transactions, or to tax 5% of them. An approach that could eliminate the repatriation tax trigger arising from the 5% exclusion altogether is to include 5% of income whether repatriated or not, and make dividends entirely exempt.

S. 2091 also has an additional temporary repatriation trigger arising from its transition rule, which allows firms to elect to repatriate under a 70% exclusion without credits, but would tax dividends until any remaining accumulated funds are exhausted. Presumably, firms would repatriate funds voluntarily from low tax jurisdictions, and then repatriate funds from countries with high foreign taxes until the backlog is exhausted.

The Grubert Mutti proposal does not have any special provision for accumulated untaxed earnings and dividends paid out of those earnings . Basically this provision was not addressed although, as noted above, the authors would expect some transition rule similar to the other proposals; this treatment was not incorporated into their revenue estimates.

## Effects on Tax Burden and Investment

Although the Discussion Draft leaves a number of options open, its objective to be revenue neutral indicates that it is more beneficial to U.S. multinational firms than the Grubert-Mutti proposal that raises revenue. Moreover the Discussion Draft proposes to finance part of the revenue loss through the one time revenue gain from the tax on existing accumulated earnings. Senator Enzi has indicated an intention for his bill to be revenue neutral as well, although it has not been scored.[71]

[70] Jeffery M. Kadet, "Territorial W&M Discussion Draft: Change Required," *Tax Notes*, January 23, 2012, pp. 463-464.

[71] See Senator Enzi's press release, at http://www.enzi.senate.gov/uploads/3.pdf.

Some elements that increase the tax burden on foreign source income (offsetting the loss from exempting dividends and in some cases branch income) are the allocation of deductions and taxation of royalties in the Grubert-Mutti proposal and the 5% inclusion of dividends in the other two proposals. The base erosion provisions may or may not increase taxes depending on which option is chosen and the extent to which firms can use the active trade or business exception to avoid the tax. Some of the reason for these differences in revenue effect is that the 5% inclusion appears to be significantly smaller than overhead costs (even excluding interest). One comment also noted that the 5% inclusion does not take account of a firm's individual circumstances.[72]

Altshuler and Grubert estimate that overhead expenses outside of interest and research expenditures are 10% of pretax earnings.[73] Moreover, their proposal would disallow the deduction regardless of whether dividends are paid out, while the 5% inclusion would apply only to dividends paid. Assuming that about 40% of earnings are paid out in a steady state the 5% provision would be 2% of total earnings. Thus the provision in the Grubert-Mutti proposal would be about five times the size of the provision in the Discussion Draft and S. 2091.

Presumably interest would also be significant. The Grubert-Mutti proposal has a direct allocation rule for the parent's interest presumably based on allocations of assets.[74] The proposal does not spell out specifics, but interest allocation could be net or gross, and it could involve only the parent interest or worldwide interest. Turning to years of 2006 and 2007, net interest as a share of combined interest and pretax earnings of nonfinancial corporations in the National Income and Product Accounts was 15% in 2006 and 21% in 2007.[75] The 2006 measure may be more appropriate as a steady state guide since profits had begun to decline in 2007. According to tax statistics, for manufacturing the share was 13% in 2006 and 18% in 2007.[76] Gross interest, the basis of the current allocation rules for the foreign tax credit limit, would be much larger, ranging from 34% to 39% of profits plus interest payments. In a related article, by Altshuler and Grubert, the analysis assumes that debt accounts for a third of the capital stock.[77] The Discussion Draft has thin capitalization rules that are based on two alternative tests: an allocation provision for net interest based on parent versus subsidiary debt-equity ratios taking into account worldwide debt and an alternative based on an as-yet-unspecified share of adjusted income, so that the effects on interest are uncertain. S. 2091 has no allocation rule.

Grubert and Mutti could have an allocation for research and development expenditures but apparently do not.[78] Thus, they have no provision that addresses profit shifting from intangibles.

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[72] Comments of Stephen Shay, KPMG, Will the U.S. Shift to a Territorial System: A Discussion of Chairman Camp's Territorial Tax Draft, http://www.us.kpmg.com/microsite/taxnewsflash/Corporate/2011/tgi-exec-sum-territorial-tax.pdf.

[73] Rosanne Altshuler and Harry Grubert, "Where Will They Go if We Go Territorial? Dividend Exemption and the Location Decisions of U.S. Multinational Corporations," *National Tax Journal*, December 2001, pp. 787-809.

[74] The proposal refers to allocating the parents interest to firms and not worldwide interest, although a worldwide allocation would be an option.

[75] See data from Economic Report of the President at http://www.gpo.gov/fdsys/pkg/ERP-2012/pdf/ERP-2012-table15.pdf.

[76] Internal Revenue Service, http://www.irs.gov/taxstats/article/0,,id=170692,00.html. In 2006, the manufacturing sector has 247 billion of interest payments, $183 billion of interest income and $481 billion in net income. In 2007, these numbers were $304 billion, $203 billion and $468 billion respectively.

[77] Rosanne Altshuler and Harry Grubert, "Where Will They Go if We Go Territorial? Dividend Exemption and the Location Decisions of U.S. Multinational Corporations," *National Tax Journal*, December 2001, pp. 787-809.

[78] Ibid.

If these costs were included, for 2006 for manufacturing they were 18% of the total of earnings and research costs.[79] Neither the discussion draft nor S. 2091 have such an allocation, although they have some options that affect base erosion that could address intangibles.

Without more specific guidelines, it is difficult to determine the share of income that would be taxed under the Grubert Mutti proposal. Using net interest, the ratio for manufacturing in 2006 relative to net income is about 15% and the overhead costs add another 10%, taxing about 25% of income, whether paid as a dividend or not. In contrast, assuming 40% of income is paid as a dividend, the 5% inclusion in the Discussion Draft and S. 2091 would tax about 2%. At a 35% rate, these effects would impose additional taxes of 8.75% (0.25 times 0.35) under the Grubert Mutti plan and 0.7% (0.05 times 0.35 times 0.40).

If the allocation of interest is made based on worldwide costs (and not just U.S. parent costs), the allocation could be smaller and firms could shift interest costs to their foreign subsidiaries and deduct them so that the effect would be only the difference between the U.S. and foreign rate. In addition, with an overall allocation, this interest cost would presumably be shifted to high tax countries. The United States would still gain revenue but some of it would be offset (from the firm's point of view) by lower tax payments to foreign countries. At the extreme, only the overhead allocation of 10% would affect taxes, leading to a 3.5 percentage point tax increase.

Both the Discussion Draft and S. 2091 include specific anti-base erosion measures which are not included in the Grubert Mutti proposal and these may to some extent substitute for cost allocation provisions. These provisions relate less to investment than to profit shifting and are discussed in the next section.

Incentives could also be affected by the treatment of royalties whose tax burden would rise as excess foreign tax credits disappear. This higher tax on royalties could encourage both more exports of products with technology embodied (as the cost of exploiting intangibles abroad increases). It could also encourage more research to be performed abroad in low tax CFCs although this effect is unclear since such research would not have a benefit as an investment (expensing and the R&D credit) as is the case in the United States.

S. 2091 also provides that royalty income will be taxed at a 17.5% rate, which reduces the additional taxes that would arise from the loss of foreign tax credits on other incomes. A lower tax on royalties is an option in the discussion draft. Under S. 2091, intangibles that fall under the anti-base erosion rules would be taxed at the full rate, 35%.

As noted earlier, none of the shifts in investment are likely to be large relative to the U.S. economy. Thus, even if the provisions induce more research to be performed abroad, the consequences would not be likely to be significant.

## Artificial Profit Shifting

There are several different anti-profit shifting regimes discussed in the proposals: the full allocation of deductions in Mutti and Grubert, the interest allocation rules plus one of three options in the Ways and Means Draft, and the combination of components of two of the three

[79] International Revenue Service statistics, at http://www.irs.gov/taxstats/article/0,,id=164402,00.html.

options for S. 2091. Although a more detailed discussion is presented below, **Table 6** summarizes the discussion.

Grubert and Mutti address artificial profit shifting by allocating deductions, including overhead administrative costs and interest. For interest deductions, this allocation method should address the shifting facilitated through leveraging, although their proposal may only allocate parent company expenses. A more comprehensive approach is to allocate world wide expenses.[80] They discuss this world wide approach as well, which would lose revenue compared to allocating only parent company costs and could potentially cause an overall revenue loss. For intangible profits, they do not address the tax on income shifted abroad. Rather they disallow a portion of the associated investment costs (research and development costs and other overhead costs such as marketing). Their anti-abuse program has the virtue of simplicity and because an increase in profits abroad triggers a tax (in the form of foregone deductions) it reduces the incentive to shift profits through that effect as well.

**Table 6. Summary of Discussion in Text of Base Erosion Provisions of the Proposals**

| | |
|---|---|
| **Grubert and Mutti** | |
| Allocation of Deductions | Allocation of overhead costs and interest is simple. It might be desirable to employ worldwide allocation. Allocation would automatically impose an additional tax on shifted profits. Grubert and Mutti have no provisions to address profit shifting through intangibles. |
| **Ways and Means Discussion Draft** | |
| Interest restrictions | Worldwide allocation of interest may be effective in dealing with leverage. The ability to meet an alternative less restrictive test may undermine the effects; it is not clear what the purpose of this alternative is. |
| Plus Option A | Provisions to tax as U.S. connected income intangible earnings in excess of 150% of costs for countries with rates below 15% (phased out between 10% and 15%) would discourage profit shifting of this nature. It creates an incentive to shift costs to low tax countries and could encourage firms to relocate. Measuring effective tax rates and identifying affected income would be complicated. |
| Or Plus Option B | Provisions to tax income in countries with rates below 10% as U.S. income would exclude Ireland, and would encourage firms to shift to slightly higher tax rate countries, or perhaps encourage tax havens to increase taxes, both of which would increase taxes paid to foreigners. Measuring effective tax rates could be complicated. Firms may be able to avoid the U.S. tax through the home country exception. |
| Or Plus Option C | This provision, which taxes all intangible income as U.S. income at a lower rate is not triggered by the country's tax rate and effectively imposes a minimum tax of 15% on intangible income. It thus imposes a lower tax rate on income in low tax jurisdictions but does not induce shifting to other countries. It also imposes the same tax rate on royalties, reducing the incentive to shift these profits into a subsidiary, but compared to a plan without this feature, encouraging production abroad. Distinguishing intangible income would be difficult. This royalty provision might violate WTO rules against export subsidies. |
| **S. 2091 (Enzi)** | |
| No Deduction Allocation | This bill has no provision for restricting leveraging directly. |

[80] When the Grubert Mutti proposal was developed, worldwide allocation was not in the law. Harry Grubert, in a conversation on July 5, 2012, indicated that worldwide allocation would be appropriate.

| | |
|---|---|
| Option B Version | Income in countries with taxes less than half the U.S. rate (17.5%) are subject to U.S. tax, unless there is an active trade or business. A higher rate encompasses more countries, including Ireland. However, it also has an incentive for affected firms to move income to slightly higher tax rate countries and involves complications in measuring effective tax rates. The provision excepts firms that are making a substantial contribution to a business, a more easily avoided rule than the one in the Discussion Draft which allows an exception only for production for the home market. |
| Plus Part of Option C | Would also tax royalties at 17.5%, which could in some cases encourage income to be received as royalties. It would encourage exploitation of intangibles abroad and might violate the WTO. |

**Source**: CRS analysis of proposals.

The Ways and Means Discussion Draft addresses the shifting due to leveraging by restricting interest deductions. They impose the lesser of two restrictions. The first is an allocation of interest based on worldwide interest and assets, much like the Grubert and Mutti approach. The second is a limit on interest relative to modified income, and since the limit is not spelled out, the extent of that restriction is yet to be determined. If a high enough ratio of interest to modified income is allowed then the interest allocation would not be very effective and since modified income is prior to not only interest but depreciation and some other production expenses, the ratio would have to be relatively low to be broadly effective. The effectiveness would need to be explored once a percentage is determined. The value of this alternative is not readily apparent given that the first restriction, the allocation rule, provides a reasonable method. The Enzi bill has no interest allocation provisions.

A specific base erosion provision outside of interest has not been chosen in the discussion draft, and it is difficult to determine how effective the base erosion proposals are likely to be. Both Options A and Option B hinge on being in a low tax country and the tax rate is relatively low, only 10%. Option A, which phases out the U.S. taxation of excess intangibles between 10% and 15% may only partially affect Ireland, for example, which has a statutory tax rate of 12.5% and Option B would miss it altogether. These tax rates are effective rates, which is appropriate, but which could be difficult to measure.[81] Options A and C require the identification of intangible income, which is not necessary for B; this problem has been identified as an important complicating factor in several comments.[82]

By triggering current taxation of intangibles when the return exceeds 150% of costs, Option A provides an incentive to push deductible development and marketing costs into the CFC, a point made in Ways and Means hearing.[83] Once a firm falls into the excess profit class a dollar of cost moved to the CFC will decrease income subject to U.S. taxation by $1.50, while increasing taxable income in the United States by $1.00 (although if the tax code retained the production activities deduction and income were eligible for it, this additional dollar would increase taxable income by $0.91).

[81] This measurement problem is pointed out by Harrington, Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of John L. Harrington, at http://waysandmeans.house.gov/UploadedFiles/Harringtonsrm1117.pdf.

[82] This complication of Options A and C is pointed out by Stephen Shay and Paul Oosterhuis, KPMG, Will the U.S. Shift to a Territorial System: A Discussion of Chairman Camp's Territorial Tax Draft, at http://www.us.kpmg.com/microsite/taxnewsflash/Corporate/2011/tgi-exec-sum-territorial-tax.pdf and by Michael Reilly, discussion reported in Shamik Trivedi, "Agreement on Territorial Plans Unlikely Despite Commonalities," Tax Notes, February 20, 2012, pp. 949-950.

[83] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, Testimony of T. Timothy Tuerff, at http://waysandmeans.house.gov/UploadedFiles/Tuerffsrm1117.pdf.

Option B, which triggers full U.S. taxation of some income in countries with tax rates below 10% would create incentives to move profits to countries with tax rates higher than the 10% level but lower than the U.S. 25% level. Ireland is a possibility, but there are many potential locations which might not currently be used as tax havens which would become so, including a number of former eastern block countries. It is also possible that jurisdictions that cater largely to U.S. multinationals would raise their own taxes to prevent U.S. firms from leaving. In either case, total U.S. income (the sum of taxes and company profits) would be reduced because a third party (the other countries) would collect a higher share of U.S. firms profits. Option B also is formulated as a cliff: once the country reaches a trigger level all income is subject to full U.S. taxes. Option B exempts from inclusion income derived in the home country (an active trade or business with income derived from the sale of property for use in the country or services provided in the country). These rules may be exploited by firms to avoid the tax.

The drawbacks of option B could also potentially affect option A as well. Since the lower taxes would apply to profits equal to 150% of costs, the lower taxes paid in countries with rates below 10% on this portion of profits would have to be traded off against higher taxes on the excess profits. However, in countries where the costs are small relative to profits firms might also have incentives in this case to shift locations.

Option C, which applies this system only to intangibles and is not triggered by a specific tax rate would also have the merit of not inducing undesirable behavioral changes. Option C would also apply this lower tax to royalties, although at least one analysis has suggested that a lower tax rate on royalties might violate WTO rules on export subsidies.[84] Several critics have pointed out the complication of measuring intangible income which would be a drawback. However, it would still require the measurement of affected income, adding complexity.

The purpose of option B could be accomplished is a way that does not encourage these undesirable behavioral responses by imposing a minimum (combined U.S. and foreign) tax on all foreign source income. Consider, for example, the 60% share of income taxed that comprises the second half of Option C. If a 15% minimum tax were imposed, it would only affect income in those countries with effective tax rates of below 15% but it would not produce incentives to move to a higher tax country.

Option B does appear to have relatively effective provisions defining an active operation that can avoid the tax in the Ways and Means Discussion Draft, although whether companies could work around them remains to be seen. The Enzi bill has a weaker rule, which would might more easily allow firms to justify an exception to the tax authorities and to the courts. The Enzi bill provision is triggered by a higher tax rate, which should capture Ireland.

One witness at the Ways and Means Hearing also noted that there is no distinction in the Discussion Draft between intangibles created in the United States and in other foreign countries: any intangible income could trigger a U.S. tax even if developed outside the United States.[85]

[84] Kristen A. Parillo, "Camp Plan Would Likely Violate WTO Rules, Buckley Says," *Tax Notes*, December 12, 2011, pp. 1327-1328.

[85] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of David G. Noren, at http://waysandmeans.house.gov/UploadedFiles/Norensrm1117.pdf.

Option C of the Ways and Means Discussion Draft and S. 2091 also contains a reduced tax rate for royalties. Under Option C, royalties would be taxed at the same rate as intangible income generated inside the CFC which would eliminate the incentive to shift newly taxed royalties into tax exempt CFC income. If two thirds of royalties were exempt before due to sheltering by foreign tax credits, this change would be a slight relative tax increase (since 40% is taxed), but if the share is lower due to small excess credits and elimination of the splitter rules it could be a tax cut. Similar points could be made about S. 2091.

## Transition

The Grubert-Mutti proposal appears to exempt dividends regardless of their source, a view that is probably consistent with their emphasis on reducing tax complexity, such as planning around repatriation. This approach provides a windfall benefit. However, as the Grubert and Mutti study is a general outline, the authors may simply not have addressed transition issues. One of the authors has indicated that it would be appropriate to impose a lower tax on the accumulated unrepatriated earnings in an approach similar to the Ways and Means Discussion Draft.[86]

The Ways and Means Discussion Draft would tax all accumulated earnings before implementation of the reform, but with an 85% exclusion, which may or may not provide a windfall since it might largely apply to earnings that would probably never be repatriated. These earnings would not have to be actually repatriated, but could be deemed repatriated, a benefit that is important if these funds are tied up in illiquid investments. Taxes would be offset by a proportional share of foreign tax credits. In a steady state, most accumulated earnings, based on past evidence and new view theory would be earnings that are permanently reinvested. However, since earnings may have accumulated at higher rates through anticipation of another repatriation holiday, more of these earnings may be planned for distribution.

One critic suggests that the deemed repatriation provision which is extended to individuals as well may not be appropriate for taxpayers not eligible for the dividend exemption.[87] Another suggests that firms may have trouble measuring the total amount of unrepatriated earnings.[88]

S. 2091 has a repatriation tax that differs from the Ways and Means provision in that it is elective on a CFC by CFC basis, the exclusion is smaller at a 70% exclusion and no foreign tax credits would be allowed. However, for income that is not elected to be taxed, the dividend relief would not occur until these accumulated earnings are exhausted. Since firms might eventually wish to repatriate earnings, this rule should create an incentive to repatriate, however, the elective aspect allows firms not to repatriate if their conditions are such that a move of this nature would be difficult (i.e., lack of funds to pay the tax).

[86] Conversation with Harry Grubert, July 2, 2012.

[87] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of John L. Harrington, at http://waysandmeans.house.gov/UploadedFiles/Harringtonsrm1117.pdf. He notes that the purpose may be able to deal with individuals transferring their earnings to corporate form, but suggests that should be dealt with in a more targeted fashion.

[88] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of Paul W. Oosterhuis, at http://waysandmeans.house.gov/UploadedFiles/Oosterhuissrm1117.pdf.

Current tax treatment is governed in some respects by tax treaties and these treaties may now come into conflict with the new proposed rules. Interactions with treaties would need to be addressed.

An issue to be determined is the treatment of foreign tax credits and losses that have been carried over. For the Grubert-Mutti proposal and the Ways and Means Discussion Draft, which are aimed at a full break from the old system, it seems appropriate to allow foreign tax credit carryovers to lapse (if any foreign tax credit carryovers remain after the taxation of accumulated earnings). That is apparently the intent of the deemed repatriation tax.[89] S. 2091 would presumably continue carryovers for entities not covered (such as branches) and tax credits associated with accumulated income not yet taxed. Treatment of losses under the Discussion Draft has not been addressed, but presumably would continue under S. 2091 which continues aspects of the pre-existing system.

## Administrative and Technical Issues

Many of the major rules discussed above would complicate tax administration. The Grubert-Mutti proposal appears to involve the least amount of complication as it has a simple exclusion, somewhat reduces the scope of Subpart F, and has a straightforward anti-abuse provision in the form of the allocation of deductions. There is no scope for a repatriation tax. Although the Ways and Means Discussion Draft is not fully fleshed out, it retains a small repatriation tax that could lead to tax planning (the 5% inclusion of dividend income), and its anti-abuse provisions could be quite complicated. S. 2091 could also potentially lead to a continued repatriation incentive.

This section addresses some other specific issues that have technical and administrative implications.

### *Including Branches*

Including branch company income under the territorial rules is contained in two of the proposals, Grubert and Mutti and the Ways and Means Discussion Draft, but not in S. 2091. There is a good reason for including branches in the scope of the territorial tax, since, if branch income is not allowed or if firms can opt out, then firms could continue to use branches versus subsidiaries for tax planning, to allow the recognition of losses but not positive earnings. Moreover, while there are non-tax reasons for operating as a branch, including branches would equalize the treatment of branch and subsidiary operations.

Nevertheless, one comment suggests that the approach in the Discussion Draft, which treats branches as if they are CFC's subject to all of the other provisions of the proposal comes with additional complications. It is difficult to: measure income of an entity that does not legally exist as if it were separate, determine when a foreign branch exists as designed in the proposal, determine the formation or liquidation of an operation that is not a separate entity, and address the rules that apply to intra-company payments. In addition, firms might shift to operating as a partnership. This comment suggests that branch income simply be exempt from the tax without defining them as CFCs[90] Another comment raises a number of specific tax issues that need to be

[89] See comment of Ray Beeman , KPMG, Will the U.S. Shift to a Territorial System: A Discussion of Chairman Camp's Territorial Tax Draft, at http://www.us.kpmg.com/microsite/taxnewsflash/Corporate/2011/tgi-exec-sum-territorial-tax.pdf.

[90] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of John L. (continued...)

addressed when branches are included, including whether taxes will be triggered by reorganization and the treatment of inter-branch payments.[91]

### *10/50 Election*

The Grubert Mutti proposal includes 10/50 corporations in their exemption system, while the Ways and Means Discussion Draft and S. 2091 allow it as an election. (Recall that a 10/50 company is one where the corporation has a 10% or more share but the company is not controlled by five or less 10% U.S. shareholders). Presumably companies would prefer to elect the exempt treatment especially as they will lose the foreign tax credits associated with dividends. One comment suggested that 10/50 corporations that wish to elect inclusion may have difficulties because they will become subject to Subpart F rules but may not be able to obtain the information on Subpart F income because they do not control the firm. In addition, 10/50 firms may not be able to compel the cash dividend payments needed to pay tax given the tax on accumulated earnings under the Ways and Means Discussion Draft,[92] and may not be able to determine the size of those accumulated earnings.[93] A concern was also expressed that the tax on accumulated deferrals would include income generated before the taxpayer purchased shares in the company.[94] In S. 2091, a similar argument could be made about the elective repatriation, which these firms may not be able to take advantage of.

### *Foreign Tax Credit Revisions*

The Ways and Means Discussion Draft eliminates foreign tax credits for CFC's, branches, and 10/50 corporations except for those associated with Subpart F income. It also eliminates the foreign tax credit baskets, splitter rules, and allocation of indirect expenses to foreign source income (including interest allocation rules). One comment suggests that these changes are problematic because individuals will still be eligible for foreign tax credits.[95] Another adds that these changes in the foreign tax credit would encourage countries to reinstate foreign withholding tax and abrogate treaties because the changes effectively eliminate the limits of current law that credits are limited to foreign source income.[96]

(...continued)

Harrington, at http://waysandmeans.house.gov/UploadedFiles/Harringtonsrm1117.pdf.

[91] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of T. Timothy Tuerff, at http://waysandmeans.house.gov/UploadedFiles/Tuerffsrm1117.pdf.

[92] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of John L. Harrington, at http://waysandmeans.house.gov/UploadedFiles/Harringtonsrm1117.pdf .

[93] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, , testimony of Paul W. Oosterhuis, at http://waysandmeans.house.gov/UploadedFiles/Oosterhuissrm1117.pdf.

[94] Report on comment of Jose Murillo at an Ernst and Young Conference, Kristen A. Parillo and Marie Sapirie, "Territorial Plan Drafters Aware of Transition Concerns," *Tax Notes*, November 14, 2011, pp. 810-812.

[95] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of John L. Harrington, at http://waysandmeans.house.gov/UploadedFiles/Harringtonsrm1117.pdf.

[96] Kristen A. Parillo, "Camp Plan Would Dramatically Affect Withholding, Buckley Says" *Tax Notes*, November 21, 2011, pp. 948-949, reporting comments by John Buckley.

### *Thin Capitalization Rules and Interest Allocation*

One comment raised the question of whether strengthened thin capitalization rules that limit debt would be extended to U.S. subsidiaries of foreign parents (where presumably weaker rules already apply), or at least that intentions in this area might need to be made clear.[97] Although the legislation is focused on U.S. multinationals and their foreign operations, profit shifting can also occur across foreign parents and their U.S. subsidiaries, the current focus of thin capitalization rules.

Another comment pointed out that with more restrictive interest allocation rules firms might want to shift borrowing abroad so that interest could be deducted in other jurisdictions, but that this change might increase borrowing costs.[98] One option that might be considered is to allow loans from the parent to foreign subsidiaries at the borrowing rate of the parent or allow the parent to guarantee subsidiary loans without triggering effective dividends.

### *Continuing Subpart F*

Some discussion of the treatment of the existing anti-abuse rules under Subpart F has occurred. At least one commentator questions why Subpart F, which was developed as a general anti-deferral provision, should continue as is with respect to certain types of income, when income is now generally exempt. One example is foreign to foreign base company income relating to sales and services, which is active income.[99]

Grubert and Mutti suggest that Subpart F should be retained to address profit shifting but modified by eliminating taxes on dividends and also on deemed dividends from investments in the United States. The Ways and Means Discussion Draft makes these two changes although they do not account for the 5% inclusion in income for either. They indicate a further consideration of Subpart F will be made. Grubert and Mutti suggest that the case for other rules such as the foreign base company rules relating to sales and services and interest would be strengthened under a territorial tax. Presumably they are referring to income shifted out the United States. S. 2091, however, specifically excludes this income from Subpart F.

Grubert and Mutti prepared their analysis before check-the-box rules (and the look-through rules) that allow CFC's to disregard their related foreign subsidiaries, which have undermined Subpart F, became so important. The Ways and Means Discussion Draft indicates that these issues will be considered separately and S. 2091 would make the look-through rules (as well as the exclusion of active financing income), currently part of extenders and having expired after 2011, permanent One comment suggested that tax reform should address the leakage in Subpart F including check-the-box and the look-through rules[100] At the same time, one of the concerns about check the box

[97] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of John L. Harrington, at http://waysandmeans.house.gov/UploadedFiles/Harringtonsrm1117.pdf.

[98] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, Testimony of T. Timothy Tuerff, at http://waysandmeans.house.gov/UploadedFiles/Tuerffsrm1117.pdf. See also Paul Oosterhuis, , KPGM, Will the U.S. Shift to a Territorial System: A Discussion of Chairman Camp's Territorial Tax Draft, at http://www.us.kpmg.com/microsite/taxnewsflash/Corporate/2011/tgi-exec-sum-territorial-tax.pdf.

[99] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of John L. Harrington, at http://waysandmeans.house.gov/UploadedFiles/Harringtonsrm1117.pdf.

[100] Kristen A. Parillo, "Camp Plan Would Dramatically Affect Withholding, Buckley Says" Tax Notes, November 21, 2011, pp. 948-949, reporting comments by Jeff Vandervolk.

and look through rules is that the result would not be greater U.S. tax collections but an increase in taxes paid to other countries. For example, if a subsidiary's interest payments from loans to its own high tax subsidiary could not longer be disregarded for purposes of Subpart F with an end to these rules, the response could be to no longer make the loan causing additional tax to be collected by the higher tax foreign country. This outcome would not be beneficial for the U.S. overall since it would reduce the sum of U.S. private profits and U.S. taxes. One comment, for example, notes that exemption would cause firms to have every incentive to reduce foreign taxes paid, and broadening of Subpart F rules should not undo that incentive.[101]

A final comment about Subpart F income is that, since this income is deemed repatriated and not actually paid out, there will be an additional tax under the Discussion Draft and S. 2091on 5% of income when these earnings are actually paid out as dividends.[102] Thus, 5% of income would be subject to double taxation.

### Revenue Consequences

The Grubert-Mutti proposal is projected to raise revenue on a permanent basis, although the gain is small, less than 2% of corporate revenues. Both the Ways and Means Discussion Draft and S. 2091 aim to be revenue neutral over the budget horizon. However, both also rely on a one time revenue gain from taxing existing accumulated earnings. Since this gain is transitory, these proposals will lose revenue on a permanent basis. Since the proposals have not been scored, there is no way to determine how large the permanent revenue loss would be, but it is likely to also be small.

## Alternatives to a Territorial Tax

As noted in the prior discussion, there are alternatives to a territorial tax that could address issues associated with repatriation and profit shifting as effectively or perhaps more effectively than the territorial tax provisions. These alternatives fall into three main groups: ending deferral and possibly limiting cross-crediting to move closer to a true worldwide system, reforming the existing system in more limited ways, particularly to address profit shifting, and a hybrid between ending deferral and a territorial tax, such as a minimum tax, which would eliminate the repatriation tax trigger. By traditional theory all of these approaches would probably attract capital back to the United States and improve efficiency in the allocation of capital, although they may create a need to further address shifting of headquarters.

These proposals are summarized briefly. Many of them are addressed in more detail in other CRS reports.[103] Note that many of the same issues that arise with a territorial tax would need to be addressed in some cases, such as dealing with the transition, and dealing with operations outside of CFCs.

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[101] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, testimony of Paul W. Oosterhuis, at http://waysandmeans.house.gov/UploadedFiles/Oosterhuissrm1117.pdf.

[102] Subcommittee on Select Revenue Measures, Ways and Means Committee, November 27, 2011, Testimony of T. Timothy Tuerff, at http://waysandmeans.house.gov/UploadedFiles/Tuerffsrm1117.pdf.

[103] CRS Report RL34115, *Reform of U.S. International Taxation: Alternatives*, by Jane G. Gravelle; CRS Report R40623, *Tax Havens: International Tax Avoidance and Evasion*, by Jane G. Gravelle.

## Ending Deferral

Ending deferral, as shown in **Table 5**, is estimated to raise $18.4 billion in FY2014. A deferral option is also included in the CBO budget options study and is estimated to raise $11.1 billion in revenue in FY2014.[104] The smaller revenue gain may reflect a provision that eliminates the current interest allocation provision for purposes of the foreign tax credit limit. It would tax income of foreign subsidiaries, while allowing foreign tax credits as in current law. Current taxation would eliminate any disincentive to repatriate, and would also reduce the benefits and scope for profit shifting. Cross-crediting would still be available. It would be more consistent with efficient resource allocation, although issues of shifting headquarters might need to be addressed further. As with territorial tax proposals, transition issues would arise which could be addressed in a fashion similar to that in the Ways and Means Discussion Draft. The revision would require the measurement of earnings under U.S. law, which could add complexity, although such measurement would also be needed for most base erosion measures as well. As with the territorial tax, issues would arise in extending the treatment to 10/50 corporations that have a large U.S. shareholder but are not controlled by a group of large U.S. shareholders, since information on earnings may not be available. This change would, however, permit the elimination of Subpart F.

## Ending Deferral and Ending Cross-Crediting Via a Per Country Limit

A greater level of taxation and a more effective provision to discourage artificial profit shifting, which would also eliminate disincentives to repatriate, is to combine ending deferral with a per country limit on foreign tax credits, preventing tax haven income from being shielded by foreign tax credits. This proposal is part of S. 727, the Wyden and Coats general tax reform plan, and is combined with a repatriation holiday similar to that enacted in 2004. This provision was estimated to raise $64.3 billion in FY2014 (see **Table 5**). This larger revenue gain aided in the reduction of the corporate tax rate in that bill to 24%. This provision would require country-by-country measures of foreign taxes paid as well as income (focusing on income earned within that country and not adjusting for intercompany dividends). Provisions would need to be enacted to prevent firms from using holding companies to avoid the per country limit and check the box and look through rules would probably need to be revised.

## Measures to Modify the Current System: the President's Proposals

The President has made several proposals that address international tax issues.

The FY2013 budget outline contains several revisions which overall would raise $16.8 billion in FY2014. Note that some of these are complex to explain, and are described in more detail in a Treasury Department document.[105]

[104] Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options*, March, 2011, p. 186, at http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/120xx/doc12085/03-10-reducingthedeficit.pdf.

[105] See U.S. Department of Treasury, *General Explanations of the Administration's FY2013 Revenue Proposals*, February 2012, http://www.treasury.gov/resource-center/tax-policy/Documents/General-Explanations-FY2013.pdf.

- Disallowing interest deductions of parent companies to the extent that income is deferred. This provision is similar to the allocation proposal in Grubert and Mutti but confined to interest and affecting deferred income. An earlier tax reform proposal by Chairman Rangel (H.R. 3970 in the 110th Congress, 2007) would have allocated a broader range of deductions, not just interest. This provision would reduce, although not eliminate, the disincentive to repatriate. ($5.9 billion).
- Limiting foreign tax credits available to the same share of total credits as the overall share of income that is repatriated. This approach would limit tax minimization by repatriating income to absorb foreign tax credits. ($5.5 billion).
- Treating excess intangibles profits as U.S. income, the same provision as Option A is the Ways and Means Discussion Draft, although the budget proposal does not specify the magnitude of the cost mark-up. ($2.5 billion). The proposal would also clarify some rules relating to the valuation of intangibles. ($0.1 billion).
- U.S. insurance companies can reduce taxes by purchasing reinsurance from foreign affiliates, with a deduction of the premiums by the U.S. firm but no tax on the income of the foreign affiliate. This provision would disallow these deductions under certain circumstances. ($0.2 billion).
- Stricter limits on interest deductions would apply to U.S. subsidiaries of firms that inverted (moved their headquarters abroad) prior to the anti-inversion rules adopted in 2004. ($0.4 billion).
- Foreign taxes paid in part to receive a benefit (i.e., the firm is paying a tax in a dual capacity) would not be credited unless the income tax is generally imposed on the country's own residents as well as foreign persons. The current rule does not require the tax to be imposed on the country's residents. This provision typically relates to taxes being substituted for royalties in oil producing countries. ($1.0 billion).
- A codification of regulations that impose on a foreign corporation or nonresident alien tax on gain from a partnership interest to the extent the gain reflects property effectively connected with U.S. business. ($0.2 billion).
- A provision to prevent a foreign affiliate from avoiding characterization as a dividend by making the distribution through a related affiliate with limited earnings and profits, causing the distribution to adjust the cost basis of stock rather than create dividend income. ($0.3 billion).
- Preventing foreign tax credits from offsetting tax on the gain from certain types of asset acquisitions. (0.1 billion ).
- A provision that prevents the reduction of earnings and profits without the reduction in foreign tax credits that can currently occur in some transactions. ($20 million).

The Administration also presented a framework for tax reform that mentioned five elements: the allocation of interest for deferred income (first bullet point above), a tax on excess intangibles (third bullet point), a minimum tax on foreign source income in low tax countries, disallowing a

deduction for the cost of moving abroad and providing a 20% credit for costs of moving an operation from abroad to the United States.[106]

The minimum tax on foreign source income, which would be a potentially important provision, is not discussed in detail. A minimum tax that could be imposed in the framework of an effective territorial system is discussed below.

## Partial or Targeted End to Deferral

A variety of more limited ways of reducing or partially eliminating deferral include eliminating deferral for specified tax havens, eliminating deferral in countries with tax rates that are below the U.S. rate by a specified proportion, eliminating deferral for income from the production of goods that are in turn imported into the United States, eliminating deferral for income from the production of goods that are exported to any other country from the foreign location, and requiring a minimum payout share. These provisions would partially achieve the goals of a general elimination of deferral.[107]

## Formula Apportionment

Another approach to addressing income shifting, whether in the current system or a revised territorial system, is through formula apportionment. With formula apportionment, income would be allocated to different jurisdictions based on their shares of some combination of sales, assets, and employment. This approach is used by many states in the United States and by the Canadian provinces to allocate corporate income. In the past, a three factor apportionment was used, but some states have moved to a sales based system. Studies have estimated a significant increase in taxes from adopting formula apportionment.[108] The ability of a formula apportionment system to address some of the problems of shifting income becomes problematic with intangible assets which, unlike production income, cannot be allocated based on tangible assets.[109] There is also a problem of coordinating with other countries so that income would not be double-taxed or never taxed.[110]

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[106] *The President's Framework for Business Tax Reform: A Joint Report by the White House and the Department of the Treasury*, February 2012, http://www.treasury.gov/resource-center/tax-policy/Documents/The-Presidents-Framework-for-Business-Tax-Reform-02-22-2012.pdf.

[107] CRS Report R40623, *Tax Havens: International Tax Avoidance and Evasion*, by Jane G. Gravelle This reports also discusses a variety of minor changes in rules including foreign tax credit provisions.

[108] Slemrod and Shackleford estimate a 38% revenue increase from an equally weighted three-factor system Douglas Shackelford and Joel Slemrod, "The Revenue Consequences of Using Formula apportionment to Calculate U.S. and Foreign Source Income: A Firm Level Analysis," *International Tax and Public Finance*, vol. 5, no. 1, 1998, pp. 41-57. Clausing and Avi-Yonah estimate a 35% increase in taxes using sales. Kimberly A. Clausing and Reuven A. Avi-Yonah, *Reforming Corporate Taxation in a Global Economy : A Proposal to Adopt Formulary Apportionment*, Brookings Institution: The Hamilton Project, Discussion paper 2007-08, June 2007.

[109] These and other issues are discussed by Rosanne Altshuler and Harry Grubert, "Formula Apportionment: Is it Better than the Current System and Are There Better Alternatives?" Oxford University Centre for Business Taxation, Working paper 09/01.

[110] CRS Report R40623, *Tax Havens: International Tax Avoidance and Evasion*, by Jane G. Gravelle, for further discussion.

## Hybrid Approaches: Minimum Tax, Partial Territorial Tax

Using the basic territorial approach embodied in the Ways and Means Draft Discussion, it would be possible to generate a relatively straightforward hybrid approach, by a modification of Base Erosion Option B to impose a simpler general minimum tax with no exceptions for active trade or business. Such a revision would technically begin with an elimination of deferral and per country foreign tax credit limit. Income, however, would be taxed at a lower tax rate. This approach would avoid the incentives to shift to a slightly higher tax jurisdiction. Moreover, it would be simpler, because it would not require any measure of a specific type of income, would not require a measure of effective tax rate, and would not require a determination of the type of activity to allow an exception. It would use U.S. rules for measurement of income, but would apply a lower statutory rate to taxable income. Foreign tax credits would need to be allowed on a country by country basis. For example, suppose the statutory rate to be applied were half the U.S. rate, or given current rates, 17.5%. In that case any income from a country with an effective tax rate on taxable income at that level (and probably a lower effective rate overall) would not be subject to U.S. tax. Such a tax regime would only affect tax havens and low tax jurisdictions.[111]

An alternative would be to require income to be repatriated (or deemed repatriated) but subject some share of it to U.S. tax and exempt the rest. An appropriate share of foreign tax credits would be disallowed. For example, if half of income is taxed, the system would be 50% a territorial tax and 50% a world wide tax without deferral. Foreign tax credit limits could be allowed on an overall basis or country by country. This approach bears some resemblance to the foreign tax credit pooling proposal in the President's budget except there is no discretion about repatriation.

Comments made on the combining of a minimum tax with a territorial system suggested that the tax rate would be important, with two observers suggesting a rate of 20%, similar to the rate used by Japan, and indicating that a 10% tax rate is too low.[112]

Both of these proposals would have the effect of eliminating the repatriation disincentive as well as reducing the incentive to shift profits (or at least the cost). Unlike proposals to tax this income at full U.S. rates, such a minimum tax is less likely to shift income to other jurisdictions that have higher rates than the United States.

In any proposal aimed at tax havens, there is a possibility that the haven or low tax country would raise its taxes and capture some of the profits. This problem is more significant with a minimum tax that it would be with full elimination of deferral, which would remove the incentive to profit shift altogether. Tax havens attracting other country's firms might be reluctant to raise taxes and it might be possible to deny credits for taxes that are increased for that purpose.

[111] A 2000 Treasury Study proposed a similar treatment and also discussed a tax at a low rate without foreign tax credits. See U.S. Department of Treasury, The Deferral of Income Earned Through U.S. Controlled Foreign Corporations, p. 91, at http://www.treasury.gov/resource-center/tax-policy/Documents/subpartf.pdf.

[112] These observations were made by Reuven Avi-Yonah and Edward Kleinbard, reported in Julie Martin, "Minimum Tax on Multinationals," *Tax Notes*, March 19, 2012, pp. 1498-2000.

# Appendix. History of International Tax Rules

As this history indicates, most of the proposals made over the years, whether adopted or not, moved not toward a territorial tax and a reduction in taxation of foreign source income, but toward a worldwide tax and increased taxation.

Deferral of tax on income from foreign incorporated subsidiaries dates from the earliest years of the income tax based reflecting legal principles of the time. The earliest income tax allowed a deduction for foreign taxes, which was replaced by an unlimited credit in 1918. In 1921 an overall limit on the foreign tax credit. similar to current law, was adopted. Beginning in 1932, a per country limit was allowed or required, although regulations that sourced income to holding companies allowed firms to achieve overall limits on their own. The per country limit was eliminated in 1976, although income was sorted into passive and active baskets to prevent this type of cross-crediting.

A number of proposals for changing the system were made but were not (or have not yet been) adopted. Eliminating deferral was proposed by President Kennedy and President Carter. The Kennedy proposals led to the anti-abuse rules (Subpart F) that tax passive and easily shifted income currently.

The Burke Hartke proposal in the 1970s would have repealed deferral and allowed a deduction rather than a credit for foreign taxes. A per country limit was proposed by the Reagan Administration as part of the Tax Reform Act of 1986, but the legislation expanded the number of baskets from two to several instead. The baskets were reduced to two again in legislation in 2004. The main consequence according to tax data, was to include income from financial services in the general basket.

Legislative proposals which would have increased taxation of international income by allocating parent company expenses, such as interest, to deferred income and not allowing it as well as allowing overall foreign taxes to be considered Proposals similar to those of President Obama were included in tax reform legislation proposed by then Ways and Means Committee Chairman Rangel in 2007. A predecessor to the Wyden Coats bill was the Wyden Gregg bill in the 111th Congress. International tax provisions are discussed in detail, through 1989, in William P. McClure and Herman B. Bouma, "The Taxation of Foreign Income from 1909 to 1989: How a Tilted Playing Field Developed," *Tax Notes*, June 19, 1989, pp. 1379.

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# A Challenging Time for International Tax Policy

By Kimberly A. Clausing

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This article discusses options facing policymakers in the taxation of multinational firms. Clausing expresses concerns about adopting a territorial tax system without due consideration of the effects on U.S. economic activity and the corporate tax base.

By any measure, the U.S. system of taxing multinational corporations is broken. Because corporations can postpone paying U.S. taxes on foreign profits indefinitely as long as they keep those profits abroad, the current system encourages firms to move factories and jobs to low-tax destinations and to keep their profits reinvested abroad. Because the corporate tax code is full of loopholes that allow firms to book income from U.S. operations as if it came from operations in low-tax countries, corporate tax revenues are significantly reduced. I recently estimated that income shifting by multinational firms costs the treasury about $90 billion a year.[1] That shifting of economic activity abroad has real costs for American workers.

Because nearly everyone agrees that the system is broken, debates over reform are intensifying. Two main approaches have emerged. The first seeks to reduce the incentive to locate economic activity and income abroad. For example, the Obama administration is proposing a minimum tax on foreign income earned in tax havens and a crackdown on corporate practices in which income from an economic activity is booked in low-tax countries while the deductions and credits associated with the same activity are booked in the United States. The bipartisan tax reform proposal by Sens. Ron Wyden, D-Ore., and Daniel Coats, R-Ind., takes a similar approach and would reduce the incentive to locate jobs and income abroad. Both of the proposals couple tighter international tax rules with a lower corporate tax rate to encourage economic investment and jobs in the United States.

Others are pushing a different approach. They would move the United States to a territorial system in which the foreign income of U.S. multinational corporations is completely exempt from U.S. taxation. That approach would significantly increase incentives for U.S. firms to move economic activity abroad. U.S. tax payments for the income from foreign operations of U.S. multinational corporations would not simply be deferred; they would be completely erased. That would eliminate constraints on shifting income abroad.

Advocates of a territorial system argue that because many of our trading partners have moved to a territorial system, we need to follow if our multinational corporations are to remain competitive. Yet most countries with territorial systems have hybrid versions of territoriality that are far different from the version being suggested for the United States. Those hybrid systems include tough antiabuse provisions that discourage the shifting of income and employment to low-tax havens; the result is often a higher tax on foreign income than applies in the United States. Under U.S. law, foreign income is not taxed until it is repatriated to the United States, and foreign tax credits are allowed for taxes paid to foreign governments. Under typical territorial systems in other countries, some foreign income is taxed currently, even if it is not repatriated. For example, Japan taxes foreign income currently when the foreign tax rate is less than 20 percent; in other countries, foreign income is taxed currently if the host country tax rate is less than one-half or three-quarters of the home country rate.[2] Thus, the hybrid systems used by our largest trading partners

[1]Kimberly A. Clausing, "The Revenue Effects of Multinational Firm Income Shifting," *Tax Notes*, Mar. 28, 2011, p. 1580, *Doc 2011-4859*, *2011 TNT 61-9*, updating Clausing, "Multinational Firm Tax Avoidance and Tax Policy," 62 *Nat'l Tax J.* 703 (Dec. 2009).

[2]*See* Joint Committee on Taxation, "Background and Selected Issues Related to the U.S. International Tax System and Systems That Exempt Foreign Business Income," JCX-33-11 (May 20, 2011), *Doc 2011-11045*, *2011 TNT 99-76*.

have more in common with the reforms suggested by the Obama administration and by Wyden and Coats than they do with a pure territorial system.

What would the effects be if the United States shifted to a pure territorial system? First, it would eviscerate the U.S. corporate tax base by eliminating any constraints to shifting income abroad. Second, it would encourage job creation abroad instead of at home.

Based on my research and that of other experts in international taxation, it is possible to estimate how many jobs are at stake in this debate. In 2008 U.S. multinational firms employed 10 million workers in affiliated firms abroad.[3] Under a pure territorial tax system, the tax incentive to locate jobs in low-tax countries would increase significantly, which I calculate would increase employment in low-tax countries by about 800,000 jobs.

The method for that calculation involves several steps:

1. First, I use the employment tax response elasticity from Table 3 of my 2009 article.[4] That study uses data from U.S. multinational operations between 1982 and 2004.

2. I assume that under a territorial system elasticity would rise by 0.98, which is the difference in foreign direct investment tax elasticities between territorial and worldwide system countries in a comprehensive 2008 meta-analysis by Ruud A. de Mooij and Sjef Ederveen.[5]

3. Using 2008 data for U.S. multinational operations from the Bureau of Economic Analysis, I use actual employment and effective tax rate data for U.S. affiliates in countries surveyed. The effective tax is calculated as the ratio of foreign taxes paid by U.S.-owned affiliates in a country to their net pre-tax income. Those are the most recent (nonpreliminary) data.

4. I assume a U.S. effective tax rate of 27.1 percent, as reported by Jane G. Gravelle.[6]

5. For each country with an effective tax rate below the U.S. rate, I calculate the implied number of additional low-tax-country jobs resulting from the larger employment elasticity.

The estimates are uncertain. The direction of possible bias of each is discussed below.

1. The older data may bias those estimates downward, since foreign activity tax responses have been rising over time.[7]

2. The elasticity difference between territorial and nonterritorial countries was estimated using data from the actual territorial and nonterritorial systems in place around the world during the previous decades. A pure territorial system would entail even larger tax responsiveness than the hybrid territorial systems that are typically used. Thus, this consideration also suggests that 800,000 could be an underestimate of the increase in jobs in low-tax countries.

3. The analysis assumes that the U.S. effective tax rate is 27.1 percent, and it considers only the difference between tax responses under territorial and nonterritorial systems. If the U.S. effective tax rate were to fall because of changes in the tax code, the calculated job responses would be lower.

4. Foreign effective tax rates have been decreasing since 2008; accounting for that would raise the magnitude of the estimates.

Table 1 illustrates the countries that would have the largest job increases in response to a territorial system, according to these calculations. While most of those countries are not tax havens, they do have lower effective tax rates than the United States. The higher tax response under a territorial system would generate increased economic activity.

**Table 1**

| Country | New Jobs |
|---|---|
| Canada | 150,000 |
| China | 73,000 |
| The Netherlands | 65,000 |
| Germany | 52,000 |
| Mexico | 39,000 |
| France | 37,000 |
| Singapore | 31,000 |
| Taiwan | 28,000 |
| India | 26,000 |
| Belgium | 26,000 |

A similar calculation can be done for the increased income shifting that would occur under a territorial system. Table 2 shows the top 10 countries receiving additional profits (gross income) under a territorial system. Most of those are low-tax

[3]This is the most recent year with revised data from the Bureau of Economic Analysis. *See* http://www.bea.gov/scb/account_articles/international/iidguide.htm#page5.

[4]*See* Clausing, *supra* note 1.

[5]De Mooij and Ederveen, "Corporate Tax Elasticities: A Reader's Guide to Empirical Findings," 24 *Oxford Rev. of Econ. Pol'y* 680 (2008).

[6]Gravelle, "International Corporate Tax Rate Comparisons and Policy Implications," Congressional Research Service R41743 (Mar. 31, 2011), *Doc 2011-7074, 2011 TNT 65-32.*

[7]*See* de Mooij and Ederveen, *supra* note 5.

havens and are the locations where disproportionate amounts of income are booked now.

| Table 2 | |
|---|---|
| **Top 10 Countries: Increased Profits** | **Effective Tax Rates of U.S. Affiliates Abroad** |
| The Netherlands | 2% |
| Luxembourg | 0.4% |
| Ireland | 4.3% |
| Bermuda | 0.6% |
| Switzerland | 3.2% |
| United Kingdom Islands, Caribbean | 1% |
| Canada | 13.6% |
| Singapore | 3.5% |
| Belgium | 8.6% |
| Germany | 18.9% |

If U.S. unemployment rates are low, jobs abroad need not displace jobs at home, although the composition of jobs may change (and multinational corporate jobs are often good, high-wage jobs). In this economy, however, those new, low-tax-country jobs could displace jobs at home. With high unemployment rates, why further tilt the playing field in favor of jobs in low-tax countries? And given today's budget climate, avoiding further erosion of the corporate tax base should be a priority.

# The Case Against E-Filing

**By Jay Starkman**

Jay Starkman

Jay Starkman is a CPA and sole practitioner in Atlanta. He is the author of *The Sex of a Hippopotamus: A Unique History of Taxes and Accounting*. He can be reached at cpa@starkman.com or at his website, http://www.starkman.com.

The author wishes to thank Lew Regenstein, Tom Ochsenschlager, Joe Scutellaro, Jean Nelsen, and Kirit Kanakiya for their invaluable assistance, though not necessarily concurrence, in writing this article.

The author argues that e-filing creates tax complexity, higher compliance costs, and the risk of audit and penalties, and it encourages cheating so extensive that tax fraud is now the third largest theft of federal funds.



Intuitively, it seems that e-filing has benefits for all stakeholders in tax compliance, particularly from the efficiency it brings through lower operating costs. But in many ways, that's not true.

E-filing has added to tax complexity, increased compliance costs, raised penalties, created a higher audit potential, and facilitated cheating so extensive that tax fraud is now the third-largest theft of federal funds after Medicare/Medicaid and unemployment insurance fraud.

The Justice Department website lists one conviction a day for tax fraud, but few concern boiler room e-file fraud and rarely for thefts over $1 million, while the fraud totals in the billions. The problem is so widespread that the IRS has set a $100,000 threshold before investigating and prosecuting these cases.[1] Its Criminal Investigation division in 2011 initiated just 276 identity fraud cases, with 81 convictions. Meanwhile, classes of 50 to 100 people at a time are being taught how to file

[1]"Tax Fraud by Identity Theft: Hearing Before the Subcomm. on Fiscal Resp. & Econ. Growth, S. Fin. Comm." (Mar. 20, 2012) (statement of Detective Sal Augeri, Tampa Police Department), *Doc 2012-5822, 2012 TNT 55-44*.

# 800,000 Jobs Shipped Overseas? Check the Math!

By Gary Clyde Hufbauer


Gary Clyde Hufbauer

Gary Clyde Hufbauer is the Reginald Jones Senior Fellow at the Peterson Institute for International Economics. He wishes to thank Julia Muir for her helpful contributions. The views expressed are his own.

In this article, Hufbauer rebuts the claims made by President Obama and economics professor Kimberly A. Clausing that a territorial tax system would shift 800,000 U.S. jobs to foreign countries.

It's high praise when the president of the United States quotes almost verbatim the findings of a college professor in his stump speech. That's the honor President Obama bestowed on professor Kimberly A. Clausing. Here is what Obama said in Cincinnati on July 16:

> We have not found any serious economic study that says Governor Romney's economic plan would actually create jobs — until today. I've got to be honest. Today we found out there's a new study out by nonpartisan economists that says Governor Romney's economic plan would, in fact, create 800,000 jobs. There's only one problem: The jobs wouldn't be in America. They would not be in America. They'd be in other countries. By eliminating taxes on corporations' foreign income, Governor Romney's plan would actually encourage companies to shift more of their operations to foreign tax havens, creating 800,000 jobs in those other countries.
>
> Now, this shouldn't be a surprise, because Governor Romney's experience has been investing in what were called "pioneers" of the business of outsourcing. Now he wants to give more tax breaks to companies that are shipping jobs overseas.
>
> So I want everybody to understand, Ohio, I've got a different theory. We don't need a President who plans to ship more jobs overseas, or wants to give more tax breaks to companies that are shipping jobs overseas.[1]

The fair implication of Obama's remarks is that a territorial tax system would shift 800,000 American jobs to foreign countries.

That's close to a paraphrase of Clausing's *Tax Notes* article, published the same day, in which she wrote:

> Based on my research and that of other experts in international taxation, it is possible to estimate how many jobs are at stake in this debate. In 2008 U.S. multinational firms employed 10 million workers in affiliated firms abroad. Under a pure territorial tax system, the tax incentive to locate jobs in low-tax countries would increase significantly, which I calculate would increase employment in low-tax countries by about 800,000 jobs.[2]

Again, the fair implication of Clausing's article is that a territorial system would shift 800,000 American jobs to foreign countries.

But that's not what Clausing's research shows.

Her calculations start with an "employment tax response elasticity," taken from an article she published in the *National Tax Journal*.[3] The semi-elasticity is -1.6 (rounded), implying that a 1 percentage point reduction in the foreign country effective tax rate (ETR) relative to the U.S. ETR (taken to be 27.1 percent) causes a 1.6 percent increase in employment of foreign affiliates of U.S.-based multinational corporations (MNCs) in that country. To give an example, if the foreign affiliate ETR is 17.1 percent, the 10 percentage point wedge is estimated to cause a 16 percent increase in the foreign affiliate's employment, other things being equal.[4]

This is where the problems begin with Clausing's arithmetic. Her data set is employment in foreign affiliates. It says nothing about employment by MNC parent companies in the United States. As between affiliates operating in different foreign

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[1]Barack Obama, "Remarks by the President at a Campaign Event" (July 16, 2012), *available at* http://www.whitehouse.gov/the-press-office/2012/07/16/remarks-president-campaign-event.

[2]Kimberly A. Clausing, "A Challenging Time for International Tax Policy," *Tax Notes*, July 16, 2012, p. 281, *Doc 2012-14139, 2012 TNT 137-5*.

[3]Clausing, "Multinational Firm Tax Avoidance and Tax Policy," 62 *Nat'l Tax J.* 703 (2009).

[4]In real life, of course, other things are not always equal. Poorer countries with lower wages might also be countries with lower ETRs. Clausing's equation might be picking up, in part, the effect of wage levels on employment in foreign affiliates.

countries, there may be a high employment response to tax differences. But employment responses as between foreign affiliates cannot be blithely attributed to employment responses between the U.S. parent company and its collected foreign affiliates. Worse, Clausing disregards employment *reductions* by U.S. MNCs in countries with higher tax rates than the United States, which her own method predicts would occur. Instead, Clausing only reports the calculated employment increases in low-tax countries.

Based on corporate tax return data for 754 large nonfinancial MNCs for 1996 to 2004, Harry Grubert reached a noteworthy finding.[5] Challenging the conventional wisdom echoed by Clausing, Grubert found that corporate tax differentials between the United States and foreign countries make little difference to U.S. production, measured by the geographic origin of sales. Grubert did not analyze investment or employment data, but the national origin of sales closely corresponds to the national location of employment and investment. Based on Grubert's results, which are grounded on corporate tax returns, Clausing's employment response elasticity is simply irrelevant to U.S. parent MNC employment experience.

There are other problems in Clausing's exposition. Clausing assumes that territorial advocates are calling for a ''pure territorial system'' with no safeguards against income shifting on a massive scale. That is factually incorrect. The sort of territorial system urged by most experts would cut the U.S. dividend repatriation tax burden perhaps to 5 percent of the corporate tax rate but would retain the current array of income-shifting safeguards and possibly add new ones. For example, Grubert and Rosanne Altshuler are favorably disposed to the Japanese variant of a territorial system, which exempts 95 percent of dividends from a foreign subsidiary (excluding dividends funded by passive income) and taxes currently any passive income not repatriated by a foreign affiliate based in a country that has a tax rate below 20 percent.[6]

Clausing enhances her own employment tax response elasticity by another -1 (rounded), drawing on the meta-analysis reported by Ruud A. de Mooij and Sjef Ederveen.[7] With this enhancement, Clausing's calculations reflect an employment tax response elasticity of -2.6 (rounded). However, the de Mooij and Ederveen finding cited by Clausing is for the outward foreign direct investment (FDI) elasticity (as between foreign affiliates) experienced by a home country that follows an exemption (territorial) system. Clausing's own research shows that the asset elasticity (an approximation of the FDI elasticity) is far higher than the employment elasticity (-4.8 versus -1.6). Consequently, an employment tax response elasticity of -2.6 is an enhancement too far.[8]

In her calculations, Clausing assumes that the entire difference between the foreign affiliate ETR and the U.S. ETR (27.1 percent) would amount to an *incremental* increase in the foreign versus U.S. tax wedge under a pure territorial system. But given the realities of dividend repatriation by U.S. MNCs, the incremental increase in the tax wedge would be less than 5 percentage points. That's because MNCs simply don't repatriate foreign earnings when the U.S. dividend repatriation tax burden is much above 5 percent. Thus Clausing's arithmetic, as applied to her own employment tax response elasticity (the coefficient of -1.6), massively exaggerates the impact of a U.S. territorial system on enlarging the effective tax wedge between income earned in the United States by MNCs and income earned in their foreign affiliates. However, as applied to the coefficient borrowed from de Mooij and Ederveen (the enhancement of -1), Clausing's procedure is appropriate (although the enhancement is too large) since the de Mooij and Ederveen coefficient relates to the mere existence of a territorial system, not the difference in ETRs between the host and home countries.

Finally, Clausing doesn't mention that both Mitt Romney and Obama have proposed cutting the U.S. statutory corporate rate to 25 percent (Romney) or 28 percent (Obama). If enacted, a cut would lower the U.S. ETR to something between 21 percent and 24 percent and narrow the calculated difference between the foreign affiliate ETR and the U.S. ETR

[5]Grubert, ''Foreign Taxes and the Growing Share of U.S. Multinational Company Income Abroad: Profits, Not Sales, Are Being Globalized,'' 65 *Nat'l Tax J.* 247 (2012).

[6]Grubert and Altshuler, ''Fixing the System: An Analysis of Alternative Proposals for the Reform of International Tax'' (June 2012), *available at* http://www.law.nyu.edu/academics/colloquia/taxpolicy/index.htm. For a detailed description of the Japanese system, see Joint Committee on Taxation, ''Background and Selected Issues Related to the U.S. International Tax System and Systems That Exempt Foreign Business Income,'' JCX-33-11 (May 20, 2011), *Doc 2011-11045*, *2011 TNT 99-76*.

[7]Ruud A. de Mooij and Sjef Ederveen, ''Corporate Tax Elasticities: A Reader's Guide to Empirical Findings,'' 24 *Oxford Rev. Econ. Pol'y* 680 (2008). It's worth noting that the -1 coefficient used by Clausing has rather low statistical significance.

[8]Also worth noting is that the coefficients calculated by de Mooij and Ederveen reflect just the impact of foreign tax rates, whereas Clausing's coefficients reflect the difference between foreign ETRs and the U.S. ETR. So there's a mismatch between the statistical foundations of the two sets of coefficients.

by between 3 and 6 percentage points.[9] Coupling corporate rate reform with a sensible territorial system would unlock a vast pool of earnings now trapped abroad for productive investment and larger consumption in the United States, thereby creating more U.S. jobs.

Driving Clausing's arithmetic and Obama's rhetoric is a zero-sum worldview. To them and many other observers, larger investment abroad spells smaller investment at home. More jobs abroad spell fewer jobs at home. In the wake of the Great Recession and a subnormal recovery, this sort of pessimism is widespread. But a zero-sum picture, in which one country's gain means another country's loss, hasn't described the broad course of global trade and investment over the past 300 years.

Careful econometric studies have compared U.S. companies that engage in outward investment with similar companies that stay at home.[10] The studies show that outward-bound firms consistently *export more* from the United States than the homebodies.[11] If U.S. tax policy is changed so as to hinder outward investment by U.S. companies, the result will be fewer U.S. exports, and fewer exports will spell fewer U.S. jobs. Since export-related jobs pay wages around 10 percent higher than the average for homebody jobs requiring similar skills, ''good jobs'' will be lost to the American economy. Conversely, a territorial system, by making U.S.-based MNCs stronger competitors on the world stage, will add exports and high-paying jobs to the U.S. economy.

Revamping U.S. tax policy to retard outward investment by U.S. MNCs will not lead to more investment at home. Mihir Desai, Fritz Foley, and James Hines show that the years in which U.S. MNCs make greater capital expenditures abroad coincide with years of greater capital spending at home by the same companies.[12] They find that 10 percent greater foreign investment by the multinationals triggers 2.2 percent *additional* domestic investment.

The plants of U.S. MNCs are the most productive in the United States, in terms of both total factor productivity and labor productivity; they are the most technology-intensive and pay the highest wages. MNCs show labor productivity 16.6 percent higher than large homebody companies and 44.6 percent higher than small U.S. companies, and MNCs pay wages that are 7 to 15 percent higher than wages at comparable domestic plants.[13] It's also worth noting that U.S. manufacturing employment has declined faster among U.S. companies that do not have foreign operations.[14]

Contrary to Clausing's recommendations and Obama's stump speeches, it defies common sense to embark on a course of taxation that would undermine these crown jewels of the American economy.

What makes a great deal more sense are tax changes that would unlock approximately $1.4 trillion of foreign earnings now held abroad in the foreign subsidiaries of U.S.-based MNCs that are unwilling to pay a heavy dividend repatriation tax.[15] In a careful study, Laura D'Andrea Tyson, Kenneth Serwin, and Eric J. Drabkin estimate that a one-time repatriation holiday, modeled after the Homeland Investment Act of 2004, would induce MNCs to repatriate to the United States about $1 trillion of those earnings. Through investment and consumption channels, the earnings would spark an increase in GDP by at least $138 billion and create more than a million U.S. jobs.[16] A simple and fair territorial tax system, with a dividend repatriation tax rate of about 5 percent of the corporate tax rate, would accomplish the same worthy goals. Moreover, a permanent territorial tax system would indefinitely enlarge U.S. exports by strengthening the competitive position of U.S.-based MNCs in world markets.

The famous 800,000 jobs number thrown out by Clausing and Obama has the right magnitude but entirely the wrong sign. A fair territorial tax system — like that in all of the other G-8 countries — would ship more than 800,000 jobs *into* the United States. A lower corporate rate and territoriality should top the tax reform agenda in 2013.

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[9]The extent of reduction in the U.S. ETR would depend on the base-broadening provisions that accompanied the rate reduction. For reasons spelled out elsewhere, Obama's proposals substantially exaggerate the magnitude of base broadening needed to ensure that a rate cut does not reduce corporate tax revenue. *See* Hufbauer and Martin Vieiro, ''Right Idea, Wrong Direction: Obama's Corporate Tax Reform Proposals,'' Peterson Institute for International Economics Policy Brief No. PB12-13, at 1-16 (May 2012).

[10]These paragraphs are drawn from Hufbauer and Theodore H. Moran, ''Hobbling Exports and Destroying Jobs,'' Peterson Institute for International Economics Policy Brief No. PB10-13, at 1-2 (June 2010).

[11]The evidence is summarized in Moran, ''American Multinationals and American Economic Interests: New Dimensions to an Old Debate,'' Peterson Institute for International Economics Working Paper No. WP09-3, at 1-22 (July 2009).

[12]Desai et al., ''Foreign Direct Investment and the Domestic Capital Stock,'' 95 *Am. Econ. Rev.* 33 (2005).

[13]Moran, *supra* note 11.

[14]Desai, ''Securing Jobs or the New Protectionism? Taxing the Overseas Activities of Multinational Firms,'' Harvard Business School Finance Working Paper No. 09-107, at 1-30 (2009).

[15]JP Morgan, ''Global Tax Rate Makers,'' North American Equity Research (May 16, 2012).

[16]Laura D'Andrea Tyson et al., ''The Benefits for the U.S. Economy of a Temporary Tax Reduction on the Repatriation of Foreign Subsidiary Earnings,'' New America Foundation, BRG Working Papers, at 3 (2011).

VIEWPOINTS
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# Response to Hufbauer: Territorial System Has Risks

**By Kimberly A. Clausing**


Kimberly A. Clausing

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This is in response to an article by Gary Clyde Hufbauer that critiqued the author's prior piece in *Tax Notes*.

Gary Clyde Hufbauer recently published an article in *Tax Notes*[1] that makes various claims about the accuracy of my own recent article in *Tax Notes*, "A Challenging Time for International Tax Policy."[2] In short, he claims that I have not checked my math and that the inferences of my analysis are inaccurate or misleading.

Hufbauer shows little understanding of the analysis behind my calculations, and his own inferences are fundamentally flawed. I will respond herein to each of his critiques in turn.

**1. Hufbauer claims that an analysis based on affiliate employment tax regressions is irrelevant to the question at hand.** He states that the analysis:

> says nothing about employment by [multinational corporation] parent companies in the United States. As between affiliates operating in different foreign countries, there may be a high employment response to tax differences. But employment responses as between foreign affiliates cannot be blithely attributed to employment responses between the U.S. parent company and its collected foreign affiliates.

This is a fundamental misunderstanding of my analysis. My employment elasticities show how U.S. multinational firm affiliate employment is associated with effective tax rate differences between countries. The calculations are very straightforward. You simply calculate the implied employment levels without the effective tax rate difference, and then you calculate the employment levels with an enhanced tax responsiveness under a territorial system, comparing it with current employment levels to predict how affiliate employment levels would change.

My analysis does not speak to the effects on jobs in the United States; I merely report how affiliate employment is sensitive to tax rate differences. At the end of the analysis, however, I draw a policy inference, which is also addressed in point 7 below. When there is weak aggregate demand and unemployment is higher than normal, one might be legitimately concerned that new jobs in low-tax countries could displace some domestic job creation.

In other words, I conclude that employment by foreign low-tax affiliates of U.S. multinationals will rise, and I then suggest that the present macroeconomic environment is not a good time to create an increased incentive for new jobs in low-tax countries. Further, even if the economy were strong, concerns remain about the incentive effects of a territorial system. I also conclude with the inarguable point that territorial regimes of the sort proposed by many U.S. multinational companies will lead to systematic erosion of the *domestic* corporate tax base.

Hufbauer goes on to state:

> Worse, Clausing disregards employment *reductions* by U.S. MNCs in countries with higher tax rates than the United States, which her own method predicts would occur. Instead, Clausing only reports the calculated employment increases in low-tax countries.

As Hufbauer surely recognizes, U.S. effective tax rates are high compared with those in other countries. In these analyses, it is common to cap effective tax rate calculations such as those in the Bureau of Economic Analysis data by the country's statutory rate. Once that is done, there are very few countries that have tax rates higher than those in the United

[1]Gary Clyde Hufbauer, "800,000 Jobs Shipped Overseas? Check the Math!" *Tax Notes*, Aug. 6, 2012, p. 717, *Doc 2012-15649, 2012 TNT 152-6*.

[2]Kimberly A. Clausing, "A Challenging Time for International Tax Policy," *Tax Notes*, July 16, 2012, p. 281, *Doc 2012-14139, 2012 TNT 137-5*.

States, and even if those countries were accounted for, the overall jobs number would be similar.

**2. Hufbauer cites a study by Harry Grubert that was recently published in the *National Tax Journal*.**[3] However, he misunderstands its implications:

> Based on Grubert's results, which are grounded on corporate tax returns, Clausing's employment response elasticity is simply irrelevant to U.S. parent MNC employment experience.

Grubert's study is sound analysis, but it does not imply that a large amount of evidence, from me and many others, is irrelevant. The study, like some of my own, simply points to the fact that reported income is far more tax responsive than real activities, such as sales. That is one of the points I make in my *National Tax Journal* article from which the employment elasticity is taken. However, there is a large body of work, cited in the meta-analyses of de Mooij and Ederveen (2008), that shows that real activities are also tax responsive at the margin.[4] My study is hardly the first to point that out.

**3. Hufbauer then challenges my exposition.** He states:

> Clausing assumes that territorial advocates are calling for a ''pure territorial system'' with no safeguards against income shifting on a massive scale. That is factually incorrect.

His statement is factually incorrect. In my analysis, I merely note that many advocates of a territorial system suggest just such a system.[5] However, I also note that real-world territorial systems often come with safeguards. Indeed, the jobs analysis assumes that the United States would adopt a more typical territorial system, because the meta-analysis elasticity difference is based on real-world territorial systems.

**4. Hufbauer's subsequent critique is that because asset elasticities are higher than employment elasticities, one should not expect employment elasticities to be higher under a territorial system.** I do not understand Hufbauer's logic; if the meta-analysis shows higher foreign direct investment elasticities for territorial countries — and it does — why would that not imply higher elasticities for all types of activity? My employment elasticity under a territorial regime remains far lower than the average meta-analysis elasticity for foreign direct investment (from *all* countries) in recent years.

**5. Hufbauer then claims that I am making faulty assumptions about the relevant tax incentives.** He states:

> Clausing assumes that the entire difference between the foreign affiliate [effective tax rate] and the U.S. ETR (27.1 percent) would amount to an *incremental* increase in the foreign versus U.S. tax wedge under a pure territorial system.

That is false. My analysis is merely based on an enhanced tax responsiveness to any existing tax rates under a territorial system. It makes no assumptions regarding any changes in tax rates. That is stated clearly in the analysis. And indeed, this enhanced responsiveness under a territorial system is exactly what would be predicted by economic theory, and it is found in many economic analyses as well as the meta-analysis.

**6. Hufbauer then claims that I ignore possible reductions in effective tax rates; however, that point is directly addressed in my piece as a possible caveat.** Still, it should be noted that if we are comparing a territorial system and a worldwide system, both with reduced corporate tax rates, the change in jobs in low-tax countries between those two hypothetical systems would still be quite similar (although the overall number of jobs in low-tax countries would diminish in both cases).

**7. Hufbauer then states:**

> Driving Clausing's arithmetic and Obama's rhetoric is a zero-sum worldview. To them and many other observers, larger investment abroad spells smaller investment at home.

Again, this is false. I explicitly note that jobs abroad need not displace jobs at home in a strong economy. However, in the current economic environment with high unemployment rates, I question whether it is good policy to further tilt the playing field in favor of jobs abroad. That is surely a relevant question when the macroeconomy is weak.

Hufbauer then proceeds to attack a straw man view that multinational companies are bad for the U.S. economy. This straw man view is quite different from my own, and I have done extensive work that illustrates the sort of benefits that Hufbauer describes. However, just because multinational companies are dynamic corporations that are good for the U.S. economy does not mean a territorial tax system is good for the U.S. economy.

A territorial system creates concerns among many economists — of which I am just one — that the U.S. corporate tax base will be eviscerated through even greater income shifting. A territorial

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[3]*See* Harry Grubert, ''Foreign Taxes and the Growing Share of U.S. Multinational Company Income Abroad: Profits, Not Sales, Are Being Globalized,'' 65 *Nat'l Tax J.* 274 (2012).

[4]*See* Ruud A. de Mooij and Sjef Ederveen, ''Corporate Tax Elasticities: A Reader's Guide to Empirical Findings,'' 24 *Oxford Rev. Econ. Pol'y* 680 (2008).

[5]*See* arguments within Edward D. Kleinbard, ''The Lessons of Stateless Income,'' 65 *Tax L. Rev.* 99 (2012). *See especially* p. 136-140.

system puts a lot of pressure on source rules. Territorial systems also strengthen the incentive to locate activities abroad. Finally, a revenue-neutral adoption of a territorial system would require higher taxes on domestic investment to offset lower taxes on foreign income; this, too, is an important consideration in determining if a territorial system is wise policy. Thus, one might legitimately wonder whether such a policy is good for the United States without doubting the important economic contributions of multinational companies.

**8. Hufbauer also makes other claims in his analysis that have little backing in the economic research.** For instance, he writes:

> Coupling corporate rate reform with a sensible territorial system would unlock a vast pool of earnings now trapped abroad for productive investment and larger consumption in the United States, thereby creating more U.S. jobs.

Yet there is little evidence that tax breaks to encourage repatriation of cash trapped abroad create jobs or investments in the United States. The studies of the repatriation holiday provided by the American Jobs Creation Act of 2004 conclude the opposite: Extra cash was used for dividends and share repurchases, not job creation or new U.S. investment.[6] Also, these ''unrepatriated'' foreign earnings are often already invested in U.S. financial institutions — for example, as bank deposits made available to borrowers.

Hufbauer also argues:

> Moreover, a permanent territorial tax system would indefinitely enlarge U.S. exports by strengthening the competitive position of U.S.-based MNCs in world markets.

This seems particularly strange in light of Hufbauer's earlier claims in his piece that (1) a territorial system would not much affect the relative tax advantage of low-tax countries; and (2) real activity is not very responsive to tax rate differences, as noted in the Grubert study. (The abstract of the Grubert study ends with the observation that ''lower taxes on foreign income do not seem to promote competitiveness.'') If those claims are true, what is the mechanism through which our competitive position in world markets is enhanced?

[6]For a review of the evidence, see Donald J. Marples and Jane G. Gravelle, ''Tax Cuts on Repatriation Earnings as Economic Stimulus: An Economic Analysis,'' Congressional Research Service R40178 (Oct. 27, 2011), *Doc 2011-22813, 2011 TNT 210-64*.

# Sales Between a Partnership And Non-Partners

By Douglas A. Kahn


Douglas A. Kahn

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Kahn argues that a 1986 amendment to section 707 invalidated several regulatory provisions promulgated under section 267.

## A. Denial of a Loss Deduction

The code denies a deduction for a loss recognized on a sale or exchange between certain related parties. Two of the principal code sections that deny a deduction in that circumstance are sections 267(a)(1) and 707(b)(1)(A). Two regulatory provisions promulgated under section 267 apply the denial of a loss deduction rule to partnerships — reg. section 1.267(b)-1(b) and temp. reg. section 1.267(a)-2T(c), Question 2. I conclude that to the extent reg. section 1.267(b)-1(b) applies to section 267(a)(1), it is invalid and has been invalid since 1986. Also, two of the questions and answers in the temporary regulation are invalid.

**1. The operation of section 267(a)(1).** Section 267(a)(1) denies a deduction for a loss recognized on a sale or exchange between persons who are related within the terms of section 267(b). In determining whether two persons are related, section 267(c) provides attribution rules treating a taxpayer as owning corporate stock that is actually (or constructively) owned by someone related to the taxpayer. The loss that is denied a deduction by section 267(a)(1) has tax consequence. The transferee (and only that transferee) of the property on which the loss deduction was denied will not recognize a gain on the subsequent disposition of the property[1] to the extent of the deduction denied to the transferor.[2]

**Example 1.** In year 1, W sold 100 shares of X stock to her daughter, D, for its value of $400. For

[1]If the property that the transferee acquired is exchanged for other property in a nonrecognition exchange, the insulation from income recognition will apply to the exchanged basis property that the transferee acquired in the nonrecognition transaction. Section 267(d)(2).

[2]Section 267(d).

LETTERS TO THE EDITOR
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## Rejoinder to Clausing

To the Editor:

Clausing's original article strongly implied that a territorial tax system would shift 800,000 U.S. jobs to foreign countries.[1] It's exactly this implication that caught President Obama's eye when he cited Clausing's 800,000 jobs figure and proclaimed, ''We don't need a President who plans to ship more jobs overseas, or wants to give more tax breaks to companies that are shipping jobs overseas.''

In responding to my critique[2] — which was centered on the implication of 800,000 jobs at risk — Clausing now concedes the central criticism.[3] She declares, ''My analysis does not speak to the effects on jobs in the United States; I merely report how affiliate employment is sensitive to tax rate differences.'' Too bad Clausing didn't put this statement in bold type at the front of her original article. Instead Clausing fooled the president and everyone else into thinking that her analysis showed that a territorial system would shift 800,000 U.S. jobs to foreign countries.

Clausing's analysis shows, at most, that a territorial tax system would create 800,000 jobs in low-tax countries. Nothing in her analysis shows that these jobs are created at the expense of US employment.[4] They may not even be created at the expense of employment in other high-tax foreign countries.[5] Only a zero-sum world view could lead Clausing to believe that the creation of 800,000 new jobs in low-tax countries is bad for the world economy or the United States.

Despite Clausing's denial (her point 7), she does indeed hold a zero-sum world view — at least when times are tough. Clausing warns that, ''When there is weak aggregate demand and unemployment is higher than normal, one might be legitimately concerned that new jobs in low-tax countries could displace some domestic job creation.'' My shorthand response is that, when times are tough, policy should be directed at stimulating productive investment. To this end, slashing corporate taxes can be a most useful tool.

At the conclusion of her response, Clausing asks, ''What is the mechanism through which our competitive position in world markets is enhanced'' by a territorial tax system? My answer is that here are two mechanisms. First, U.S.-based MNCs could then repatriate a significant part of the $1.7 trillion stock of earnings held abroad for productive investment in the United States without incurring a substantial US tax burden.[6] Second, U.S.-based MNCs could then compete with foreign-based MNCs on equivalent tax terms in third-country markets.

Gary Hufbauer
Reginald Jones Senior Fellow
Peterson Institute for
International Economics
Aug. 13, 2012

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[1]Kimberly A. Clausing, ''A Challenging Time for International Tax Policy,'' *Tax Notes*, July 16, 2012, p. 281, *Doc 2012-14139*, *2012 TNT 137-5*.

[2]Gary Clyde Hufbauer, ''800,000 Jobs Shipped Overseas? Check the Math!'' *Tax Notes*, Aug. 6, 2012, p. 717, *Doc 2012-15649*, *2012 TNT 152-6*.

[3]Kimberly A. Clausing, ''Response to Hufbauer: Territorial System Has Risks,'' *Tax Notes*, Aug. 13, 2012, p. 825, *Doc 2012-16954, 2012 TNT 156-7*.

[4]Even Jane Gravelle, no friend of territorial taxation or lower corporate tax rates, concludes that ''the effects of . . . reducing U.S. investment in the case of a territorial tax . . . are likely quite modest.'' See Jane G. Gravelle, ''Moving to a Territorial Income Tax: Options and Challenges,'' Congressional Research Service, July 25, 2012, p. 20.

[5]The International Monetary Fund, in a cautious assessment of territoriality, concluded that, ''In any event, because little residual U.S. tax on foreign earnings is paid, the stimulus to outbound FDI would likely be small. The effect of territoriality on FDI to high tax rate countries would likely also be small; however, some of that investment may be siphoned off to lower-tax countries, because the effective tax rate differential between high- and low-rate countries would also increase.'' See International Monetary Fund, ''United States: Selected Issues,'' IMF Country Report No. 12/214, August 2012, p. 90.

[6]JP Morgan now estimates the stock of earnings held abroad at $1.7 trillion, up from $1.4 trillion in 2010. See ''Global Tax Rate Makers,'' North America Equity Research, May 16, 2012. The arguments that a territorial system would lead to substantial repatriation of foreign earnings (up to $1 trillion) are set forth by Laura D'Andrea Tyson et al., ''The Benefits for the U.S. Economy of a Temporary Tax Reduction on the Repatriation of Foreign Subsidiary Earnings,'' New America Foundation, BRG Working Papers (2011).

**(Footnote continued in next column.)**

**FACT CHECK: Obama and the phantom peace dividend**
By Calvin Woodward and Tom Raum
Associated Press

EXCERPT

WASHINGTON (AP) —

OBAMA: "And now you have a choice: We can give more tax breaks to corporations that ship jobs overseas or we can start rewarding companies that open new plants and train new workers and create new jobs here in the United States of America."

BIDEN: "Gov. Romney believes that in the global economy, it doesn't much matter where American companies put their money or where they create jobs. As a matter of fact, he has a new tax proposal — the territorial tax — that experts say will create 800,000 jobs, all of them overseas."

THE FACTS: Republican presidential candidate Mitt Romney's proposal is actually aimed at encouraging investment in the U.S., not overseas.

The U.S. currently has a global tax system that is filled with credits, exemptions and deductions that enable many companies to avoid U.S. taxes and provides an incentive for corporations to keep their profits in other countries. Whether Romney's plan would spur investment in the U.S. is debatable, but it's not a plan aimed at dispersing profits abroad.

Experts differ on the impact of a territorial system on employment in the U.S. But Biden's implication that Romney's plan sends jobs abroad is not supported by the expert opinion he cites.

Kimberly Clausing, an economics professor at Reed College in Portland, Ore., said a pure territorial tax system could increase employment in low-tax countries by 800,000. But that did not mean U.S. jobs moving overseas. Clausing later wrote: "My analysis does not speak to the effects on jobs in the United States."

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# A Better Way to Tax U.S. Businesses

*by Mihir A. Desai*

# A Better Way to Tax U.S. Businesses

*by Mihir A. Desai*

PHOTOGRAPHY: MARK HOOPER

**Mihir A. Desai** is the Mizuho Financial Group Professor of Finance and senior associate dean for planning and university affairs at Harvard Business School and a professor of law at Harvard Law School.

Of all the policy changes that could improve the competitive position of the United States and the living standards of Americans, revamping the corporate tax code is perhaps the most obvious and least painful. High corporate taxes divert capital away from the U.S. corporate sector and toward noncorporate uses and other countries. They therefore limit investments that would raise the productivity of American workers and would increase real wages. This is the cruel logic of a corporate tax in a global economy—that its burden falls most heavily on workers.

What principles should guide a reform of the corporate tax that would advance American interests? First, the structure of the tax must reflect developments in the world economy—notably, declining tax rates in other nations, the mobility of innovative and headquarters activities, and the rising importance of non-U.S. markets. Second, corporate tax reform will probably need to be instituted separately from fundamental tax reform and must be roughly revenue-neutral, given fiscal and political realities. Third, any reform must relegitimize corporations as responsible citizens and the corporate tax as a meaningful policy instrument.

The proposal elaborated on in this article follows those three principles. It calls for a significant reduction in the corporate tax rate, a new tax policy toward innovation, and an end to taxes on active foreign income—changes that would give global corporations better incentives to locate and invest in the United States. It proposes a tax on the growing noncorporate business sector, to reduce distortions in firms' business structures and bring in revenues that offset corporate rate reductions. It also recommends aligning the definition of taxable income with what corporations report to capital markets, which could help broaden the corporate tax base, further

fund rate reductions, and restore the public's trust in business.

These changes won't be truly effective, however, unless managers change their behavior. The complexity of the current system and the proliferation of tax avoidance techniques have made the corporate tax optional for many global corporations. Tax has been transformed from a compliance function into a profit center that provides the pennies needed to reach earnings per share targets. More broadly, globalization has led countless corporations to view countries' infrastructures as interchangeable, and national identities and responsibilities as passé. Rather than shirking their tax obligations, business leaders should treat them as seriously as their other social responsibilities.

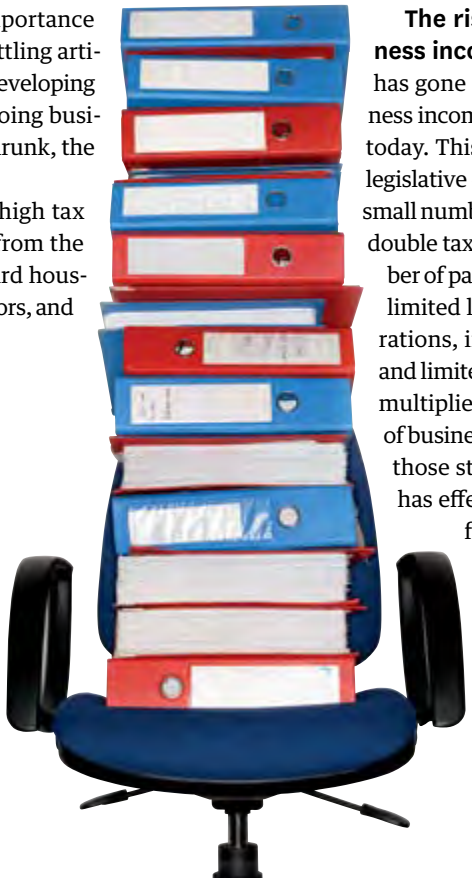
## The Imperatives for Change

Four developments in the U.S. economy make significant corporate tax reform an urgent priority. Any blueprint for change needs to address them.

**The worst of all worlds—high rates and a narrow base.** In 1986, the year of the last significant tax reform, the U.S. corporate tax rate was lower than that of most developed countries. Today the top U.S. corporate rate of 35% is one of the world's highest. During the intervening years, America's global economic importance decreased—a sometimes unsettling artifact of welcome growth in the developing world. As the importance of doing business in the United States has shrunk, the relative cost has risen rapidly.

Because capital is mobile, high tax rates divert investment away from the U.S. corporate sector and toward housing, noncorporate business sectors, and foreign countries. American workers need that capital to become more productive. When it's invested elsewhere, real wages decline, and if product prices are set globally, there is no place for the corporate tax to land but straight on the back of the least-mobile factor in this setting: the American worker. The flow of capital out of the United States only accelerates as opportunities in the rest of the world increase. This is the key to understanding why, despite political rhetoric to the contrary, reforming the corporate tax is central to improving the position of the American worker.

High corporate tax rates have further adverse consequences in a global setting. As corporations seize innumerable opportunities to shift income to lower-tax jurisdictions, tax revenue falls and top talent is diverted to tax-avoidance endeavors that create no economic value. Corporations spend more on lobbying and political donations, because managers place a premium on shaping legislation. In short, high rates increase the returns corporations get on questionable activities, corrupt the political process, and ultimately reduce the tax base. There are consequences within the corporate sector, too: Firms with less-mobile income—domestic retailers, for example—and fewer political connections suffer disproportionately from high rates.



**The rise of noncorporate business income.** Noncorporate income has gone from less than 20% of business income in 1986 to more than 50% today. This is a by-product of modest legislative efforts to allow entities with small numbers of shareholders to avoid double taxation. In response, the number of pass-through entities—such as limited liability companies, S corporations, investment trust structures, and limited partnerships—has rapidly multiplied, and a significant amount of business activity has migrated into those structures. The high tax rate has effectively driven capital away from the corporate sector and toward activities that can be shoehorned into the noncorporate business sector. Sectors that can use these structures—primarily the financial management of domestic

Tax has been transformed from a compliance function into a profit center that provides the pennies needed to reach earnings targets.

## Idea in Brief

With its high statutory rates, low revenues, and perverse incentives, the U.S. corporate tax code is broken.

Because multinational corporations are able to largely escape it, its burden falls most heavily on domestic-focused industries and on workers. It also drives capital out of the corporate sector and into noncorporate business. By skewing investments in these ways, the corporate tax reduces economic efficiency and productivity.

Fixing the system will require rate reductions and the elimination of attempts to tax overseas income. But it will also require heavier taxation of noncorporate businesses, an end to the disconnect between taxable income and the earnings reported to investors, and a commitment by business leaders to treat tax obligations as responsibilities to be embraced rather than costs to be minimized.

real estate, natural resources, and health care assets—have grown disproportionately. The remarkable "financialization" of the American economy over the past 25 years is in part an outcome of these incentives.

Because only private companies are allowed to set up such structures, corporations effectively pay a toll to be public. It's not clear why U.S. public capital markets should be hampered by such a toll.

**The globalization of firm activity.** As the world economy has become more integrated, nondomestic income at U.S.-based multinational firms has jumped. On average, foreign operations are growing more quickly and are more profitable than operations at home.

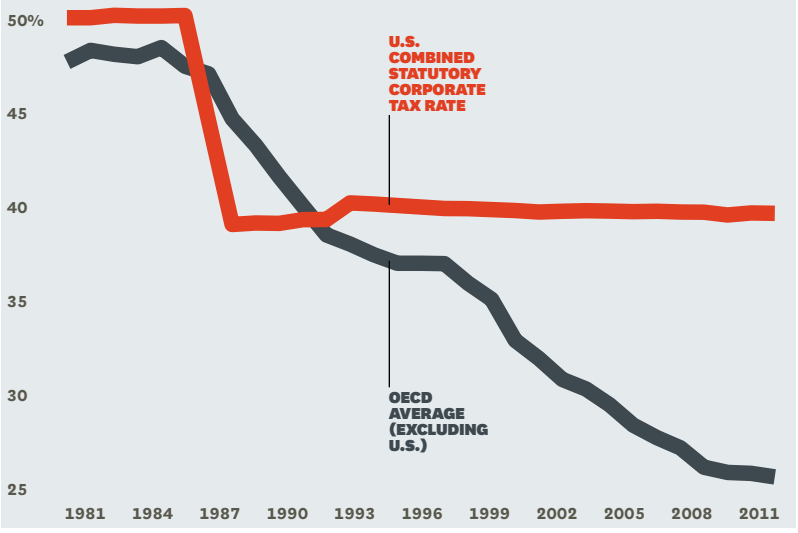
Under its current system the United States taxes the worldwide income of its citizens, including corporations. Foreign income is taxed by the source country and then taxed again by the U.S. upon repatriation, with credits provided for taxes already paid to the source country. This approach aims to ensure that investments face the same tax rate regardless of where they're made, which sounds logical enough. But that logic is flawed for two reasons: First, imposing a tax upon repatriation encourages American firms to keep capital offshore. Second, and even more important, the approach assumes that whenever firms invest abroad, the United States loses a corresponding amount of investment. In fact, the evidence suggests that as firms enter new markets and become more efficient, they expand at home. Indeed, it is naive to think that penalizing the global activities of firms in today's world will help them become better employers at home.

The appropriate policy is not to tax active foreign income, because doing so creates different tax treatments for investments made by U.S.-based and foreign-based corporations. Such discrimination reduces aggregate productivity because it can reward less-productive owners with higher after-tax returns. Other governments around the world have recognized this; among the large developed economies, the United States is now alone in taxing the worldwide income of its corporations. A particular irony of the tax on foreign income is that it raises little revenue. So eliminating it could end significant distortions in the allocation of capital and increase the supply of domestic corporate capital, all while resulting in a minimal loss of revenue.

With globalization, corporations have also entered a new era of mobility, in which they can change their national identities with ease. Several UK companies left their home for Ireland in response to the old UK regime of taxing foreign income. Mergers

### The U.S. Tax Rate Has Become Increasingly Uncompetitive

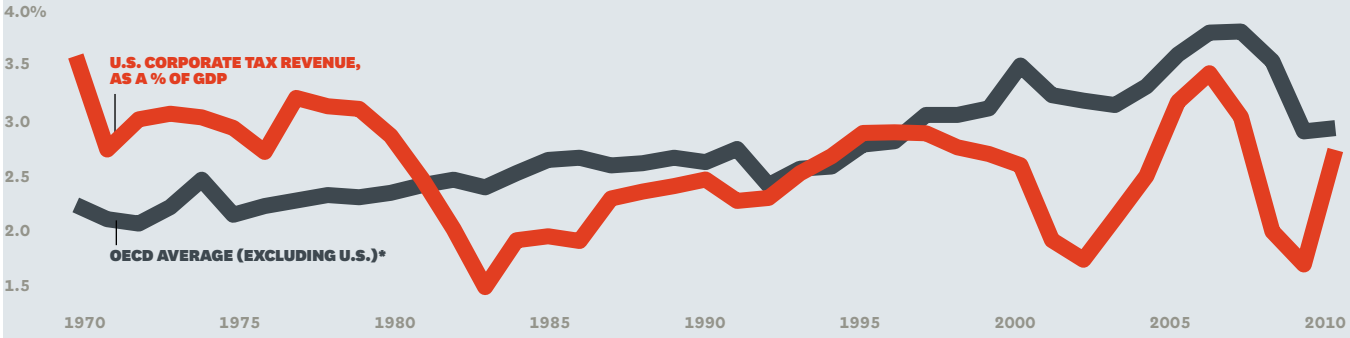
Until the early 1990s the combined (state and federal) statutory corporate tax rate in the U.S. kept pace with the rate in most developed countries. But during the past 20 years, rates in other OECD nations have fallen sharply, making the U.S. an outlier.




PHOTOGRAPHY: GETTY IMAGES

## Higher Rates Don't Translate into Higher Revenue

Despite having one of the highest corporate tax rates, the U.S. now collects less in corporate tax revenue, as a percentage of GDP, than most of the other OECD nations.




*EXCLUDES MEXICO AND CHILE BECAUSE OF A LACK OF DATA.

and acquisitions provide another way for firms to effectively redomicile themselves, and entrepreneurs are choosing their homes on the basis of tax regimes. The exceptional treatment of foreign income for American firms is all the more problematic because headquarters can easily migrate out of the United States, taking associated jobs with them.

**The decoupling of financial and taxable income.** It is now fairly common for American firms to announce large profits to the capital markets while reporting no taxable income to the government. The disconnect has multiple causes, including tax policies such as those related to the depreciation of new equipment. Income reported to tax authorities no longer has any meaningful connection to income reported to Wall Street.

This has several adverse consequences. For starters, shareholders are deprived of a true understanding of the economics of firm performance. How can one get a clear grasp of profits when they're being characterized opportunistically for the audience in question? Managers also devote resources that could otherwise be invested in growth to capitalizing on the differences in reporting requirements. (Imagine how creative individuals would be in reporting personal income if they could obtain mortgages without submitting their tax returns.) Finally, the public loses faith in corporations when leading companies repeatedly boast of profits while not paying taxes.

Tying the corporate tax more closely to reported earnings could broaden the corporate tax base and restore credibility to corporations and the tax as a whole. But rather than making the two kinds of profit reports conform completely (which might reduce the information conveyed to capital markets), one could loosely align them by requiring firms to pay a minimum percentage of their reported financial income over a period of years.

### A Code That Strengthens U.S. Businesses and Workers

A reform that combined a significant rate reduction, an end to the foreign-income tax, a new tax on noncorporate business income, and a closer link between tax payments and reported earnings would pay for itself. The revenue lost by cutting the rate and exempting overseas income would be offset by the revenue gained from implementing the other two measures. Estimates using recent data suggest that a corporate rate cut from 35% to 18% could be funded by a 5% tax on noncorporate business income and by aligning taxable income with income figures on financial reports. What's more, such a reform would advance the integrity of the tax system and ensure that the world's best global companies want to be headquartered in the United States, rather than flee it.

Over the years the corporate tax code has often been amended to spur innovative activity—for example, through the research-and-development tax credit—and to favor particular industries, such as manufacturing. These diffuse efforts complicate the tax code and, because they're usually structured as temporary provisions, often prove ineffective. Legislators would do better to concentrate on an overall rate reduction and on luring innovative activity through a strengthened version of the "patent boxes" that have become popular around the world. A patent box would tax the returns to intellectual property at a preferential rate as long as that intellectual property was developed and employed within the United States, thus promoting higher-quality domestic jobs.

Such a change and the move away from a worldwide tax regime also require changes to the transfer-pricing regime employed by the United States. Currently, the fiction of using prices that would have been obtained between unrelated parties for trans-

The complexity of the system and the proliferation of avoidance techniques have made taxes optional for many corporations.

actions within multinational firms creates too much leeway for reallocating profits out of the United States, especially with the growing importance of intangible property. Transfer-pricing standards need to be reoriented so that how multinational firms distribute resources, talent, and profits around the world determines the amount of profits that can be rightfully allocated to different jurisdictions. The illusion that profits are accruing to post-office boxes in sunny locations undercuts confidence in the tax system overall and needs to be countered by considering the actual location of resources and managers within firms.

## Corporate Taxes as a Social Responsibility

American corporations have become more aggressive about minimizing their tax obligations. The rise in intangible assets, the mobility of income, the availability of intermediaries who peddle avoidance strategies, and the increasing attention paid to reported earnings have all made tax planning an important piece of financial management. As a result, more than half of American corporations no longer have significant domestic tax obligations, according to the U.S. Government Accountability Office.

At the same time, ironically, managers have come to embrace corporate social responsibility. Companies routinely tout their constructive role in society and pour resources into social programs even as they pursue aggressive tax strategies. Instead they should show their commitment to their communities by treating their tax obligations as a responsibility commensurate with, say, abiding by environmental regulations.

Boards of directors and managers could promote that attitude by ensuring that the performance of tax directors was evaluated on compliance rather than profit maximization. Codes of ethics could prohibit transactions that serve only to reduce tax obligations. In short, any statement of corporate values that declares a company will honor commitments to outside stakeholders—communities, the environment, customers—should also include a commitment to fulfill tax obligations. These efforts should occur hand in hand with the policy changes described earlier. Insisting on tax responsibility when the U.S. tax system is out of step with global norms is unfeasible and, perhaps, unfair.

Finally, firms should commit to reporting in greater detail precisely what their tax payments have been. Continued obfuscation over such a significant set of payments should not be tolerated by shareholders. Clarity over tax payments will help shareholders understand the underlying economics of businesses and ensure that efforts to reach earnings targets will not be abetted by transitory manipulations of tax payments.

**THE CORPORATE TAX HAS BECOME** a major obstacle to investment in the corporate sector of the United States and, consequently, a drag on the productivity and real wages of the American worker. Its impact worsens every day as the noncorporate business sector expands, opportunities for savings become more global, and attractive foreign investment opportunities multiply.

A handful of changes would transform the corporate tax system from an obstacle to an asset. But these must be matched by a shift in the managerial approach to corporate taxes: from an opportunistic perspective to one that treats tax obligations as a commitment to important stakeholders. Renewing the contract between managers, shareholders, and citizens along these lines can lay the foundation for what the U.S. needs—faster growth in the productivity and real wages of American workers.

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**Jobs Council Is Sidelined As President Courts Voters**

By Carol E. Lee and John D. McKinnon
19 July 2012
00:17 GMT
The Wall Street Journal Online


President Barack Obama is at odds with some of his handpicked outside advisers on hot-button election topics such as regulations and corporate taxes.

Many of the recommendations at issue stem from the president's Council on Jobs and Competitiveness, a group of business and labor leaders with whom Mr. Obama hasn't met in six months.

The disconnect arises as business issues have moved to the forefront of the campaign. The president is seeking to paint his opponent, Republican Mitt Romney, as someone who puts business interests ahead of the middle class. Mr. Romney, for his part, is stepping up his criticism of the president as anti-business. Mr. Obama had created advisory groups such as the Jobs Council, in part to inoculate himself against such labels.

This week, the Obama campaign has focused on Mr. Romney's proposal to shift the U.S. to a "territorial" tax system, where companies pay U.S. taxes on their domestic, rather than world-wide, income. Many members of the jobs council and three other of Mr. Obama's outside advisory groups, including his Simpson-Bowles fiscal commission, have made the same recommendation.

Mr. Romney has championed their view on the campaign trail, while Mr. Obama has been campaigning against it.

In Ohio, a battleground manufacturing state, Mr. Obama this week said the proposal "would actually encourage companies to shift more of their operations to foreign tax havens."

On Wednesday in the same state, Mr. Romney contrasted the number of presidential fundraisers with the number of times the jobs council has met recently. "His priority is not creating jobs for you; his priority is trying to keep his own job," Mr. Romney said.

A recent update from the jobs council said the administration has implemented or made significant progress on 54 of the 60 recommendations for executive action. It holds monthly calls to track such progress. Executives at a recent meeting of the President's Export Council praised the administration's effectiveness in implementing its recommendations.

Still, important differences remain. The latest example came this week when a new set of recommendations emerged from Mr. Obama's Advanced Manufacturing Partnership, which includes business executives, educators and others. In its report, the group said a U.S. tax overhaul "must consider the tax treatment of overseas earnings of U.S.-based corporations," including moving to a domestic-only or territorial taxation system.

Republicans say the White House also has been slow to initiate new free-trade agreements, which have been recommended by the export council and Advanced Manufacturing Partnership. Republicans also point to cost-benefit analysis for independent regulatory commissions, a Jobs Council recommendation.

"This White House has been in re-election mode for more than a year now," said Sen. Marco Rubio (R., Fla.) "You're seeing that repeatedly, whether it's ignoring his own Simpson-Bowles commission or ignoring the recommendation of the Jobs Council." The Republican National Committee on Wednesday dubbed it the "Missing Jobs Council."

The White House said Mr. Obama's outside advisory groups weren't designed to be in agreement all the time. A senior administration official noted Mr. Obama successfully pushed trade pacts with South Korea, Panama and Colombia and has made headway on trans-Pacific Partnership agreements. The official also said the administration considers cost-benefit analysis one of its successes.

Mr. Obama has met with his jobs council four times since 2011, and the White House said the group plans to hold six smaller meetings in the next few months. White House press secretary Jay Carney said Mr. Obama hasn't met with the group since January because he has "a lot on his plate." Mr. Obama doesn't "support every idea that everybody has put on the table because he has to balance the various interests that are at stake when he looks at what's best for the American economy," Mr. Carney said.

Labor leaders on the jobs panel, including AFL-CIO President Richard Trumka, have publicly disagreed with some of the council's recommendations. Thea Lee, deputy chief of staff at AFL-CIO, said the group believes it is "perfectly reasonable" for Mr. Obama to choose which recommendations to accept or reject.

The Jobs Council members themselves appear to be backing the president, even if he isn't always backing them. At least eight of the 26-strong group have given the maximum amount allowed under federal law to Mr. Obama's re-election campaign, according to the Center for Responsive Politics. None appear to have given to Mr. Romney this year, according to the most recent Federal Election Commission filings from the Center.

Daniel Lippman contributed to this article.

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NEWS AND ANALYSIS
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ECONOMIC ANALYSIS

# The Holy Grail of Tax Reform

*By Martin A. Sullivan — martysullivan@comcast.net*

Globalization has made the battle between tax fairness and economic growth fiercer with each passing year. The educated and talented are getting more rich and famous while wages for unskilled labor remain stagnant. The resulting growth of inequality has raised consciousness about the need for fairness in the tax system.

Although there is a lot of kicking and screaming around the edges, there is little doubt that the public consensus on fairness coalesces around the idea that households with higher incomes should be taxed at higher rates. Our federal tax system for the most part follows that approach. And even the presumptive presidential nominee of the Republican Party says he wants to keep it that way. ''I'm not looking for tax cuts for the rich,'' Mitt Romney told ABC News on April 16.

As the gap between the rich and poor has grown wider, capital has become more mobile. So as governments are under pressure to keep taxes progressive, they are also under pressure to cut taxes on businesses, particularly on footloose multinationals. A business that in the old days might have scaled back job-creating investment by a few percentage points in response to high taxes will now relocate entire facilities offshore just for tax benefits.

Economists and most conservatives believe a key feature of a competitive tax system is the minimization, or preferably the elimination, of taxes on capital income (or its approximate equivalent, providing an upfront deduction for saving). By taxing consumption instead of income, a government can eliminate the bias against saving and investment and promote growth.

But because the rich consume proportionately less of their income than the poor, such a tax is inherently less progressive than an income tax. Moreover, most consumption taxes — like VATs and the proposed flat tax and FairTax — have only a single rate. So both the rate structure and the base of most consumption taxes tilt the tax burden down the income scale.

With the demand greater than ever for both fairness and growth, any tax plan that can credibly promote both — instead of pitting one against the other — is a plan that should attract a lot of attention. That is exactly what Robert Carroll and Alan Viard provide in their new book, *Progressive Consumption Taxation: The X Tax Revisited.*

According to the authors, the United States should adopt the Bradford X tax (named after the late Princeton economist David Bradford, who had the original idea). The X tax is a consumption tax with graduated rates, and it can replicate the current distribution of the tax burden and provide for significant economic growth, the authors write. The tax is also inherently simpler than the current income tax. Those are bold claims. But with a combination of facts, an encyclopedic knowledge of tax economics, and clear writing, they make a convincing case.

> ***The X tax is a consumption tax with graduated rates, and it can replicate the current distribution of the tax burden and provide for significant economic growth.***

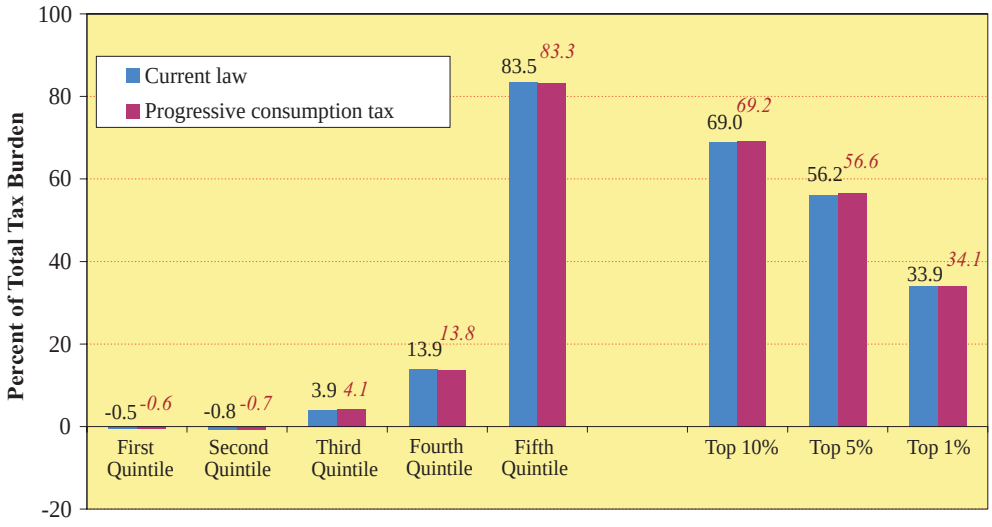
Carroll, now at Ernst & Young LLP, was Treasury deputy assistant secretary for tax policy during the George W. Bush administration. Viard is a resident scholar at the American Enterprise Institute. They are proposing that the United States dump the individual income tax, the corporate tax, and the estate and gift tax and replace them with a broad-based consumption tax. This would seem to put them squarely in the same camp as proponents of the flat tax and the FairTax. But the resemblance of *Progressive Consumption Taxation: The X Tax Revisited* to most prior works advocating radical reform is only superficial. There is no stridency, no overselling, and for the most part, no glossing over the numerous difficulties of any major reform plan.

They educate more than advocate. And that makes the book relevant not just to readers interested in overhauling the code in the particular way the authors suggest, but also to anybody who wants a balanced overview of the latest developments in tax economics.

## A Two-Part VAT

The X tax has two parts: a household wage tax and a business cash flow tax. The household wage tax has a standard deduction and a progressive rate

**Distribution of the Tax Burden Under Current Law and a Progressive Consumption Tax**




*Source*: Treasury's Office of Tax Analysis, *Simple, Fair, and Pro-Growth: Proposals to Fix America's Tax System*, 2005, *Doc 2005-22112*, *2005 TNT 211-14*.

structure. Individuals would file annual returns, and an employer would withhold income taxes as under current law. Individuals would pay tax only on compensation paid by employers. They would pay no tax on dividends, interest, capital gains, or business profits. Payroll taxes for Social Security and Medicare would still be collected.

The business cash flow tax has a rate equal to the top individual rate. The tax base is gross business receipts less deductions for all purchases and for wages. Interest and other capital income would be excluded, and no deductions would be allowed for interest. Capital expenditures would be written off immediately.

Except for the rate structure, the X tax is basically the same as the flat tax. The flat tax, in turn, is basically a subtraction method VAT divided into two parts. The difference between a VAT and the flat tax is that a VAT is collected only from businesses and employee compensation is not deductible, while under a flat tax, businesses can deduct employee compensation but it is taxed at the individual level.

Can a replacement consumption tax be as progressive as current law? Contrary to what most may think, that would not be difficult at all, according to Carroll and Viard. Their main evidence supporting this claim is a Treasury distribution analysis of an X tax proposal that President Bush's tax reform panel considered in 2005. Under that plan, the household wage tax would have rates of 15, 25, and 35 percent, with the break points at $80,000 and $115,000 (in 2006 dollars). The business cash flow tax would be a flat 35 percent. As shown in Figure 1, the distribution of the tax burden of that progressive consumption tax is nearly identical to that of current law.

Because they do not want to get entangled in the debate about extension of the Bush tax cuts and the degree of base broadening, Carroll and Viard avoid wedding themselves to any set of tax rates for their own plan. When it is necessary to use real numbers, they assume a top rate of 38.8 percent "purely for illustrative purposes."

## Not All Capital Income Would Be Exempt

It is not just the graduated rate structure that makes the tax progressive. Under the X tax and similar consumption taxes, the returns from "old capital" — capital in place before enactment — are subject to the business cash flow tax. Moreover, profits that generate a rate of return above the rate of return on marginal new investment are also subject to the business cash flow tax.

That is a critical point that is difficult for noneconomists to understand. The central economic benefit of consumption taxation — that is, the elimination of the bias against saving and investment — is achieved primarily though the expensing of capital expenditures. Expensing of new capital provides a tax benefit that is roughly equal to tax exemption of normal returns on capital. And that is why you will hear that under a consumption tax, the tax rate on capital income is zero. But more precisely, what economists really mean is that the

tax rate on income from a particular type of critically important capital — the tax rate on expected income from *marginal* investment in *new* capital — is zero.

Because expensing is available only for capital placed in service on or after the effective date, old capital gets no benefit. That does not particularly bother economists, because it is the tax treatment of new capital that determines investment behavior. To achieve the economic benefits of a consumption tax, it is only necessary to exempt returns on new capital from tax.

Because expensing provides a tax benefit equivalent to the exemption of normal returns on capital, investments with above-normal returns are still subject to tax on the excess. But economists are not particularly concerned about investments with above-normal returns, because businesses will undertake these regardless of tax incentives. To achieve the economic benefits of a consumption tax, it is only necessary to exempt normal returns on capital from tax, because those are the only returns that affect behavior.

***The authors cite a variety of studies indicating that the long-run increase in GDP from a switch to consumption taxation would be between 2 percent and 9 percent.***

The expensing provisions of the X tax exempt the normal returns on new capital, so that the decision to save is no longer distorted by the tax system. But returns on existing capital are still taxed, and above-average returns on new capital are still taxed. The taxation of these returns at the top rate under the business cash flow tax contributes significantly to the progressivity of the X tax.

What kind of growth can we expect from a wholesale switch from income to consumption taxation? Noting, as all economists should, that estimates are ''rough and uncertain,'' the authors cite a variety of studies indicating that the long-run increase in GDP from a switch to consumption taxation would be between 2 percent and 9 percent. For the X tax that Carroll and Viard propose, the estimates at the low end of the range are probably more relevant because of the graduated rate structure and transition relief they propose. Transition relief is critical to the estimates because much of the economic benefit of a consumption tax is the result of the one-time levy a consumption tax effectively imposes on existing capital. The larger the transition relief, the smaller the expected economic benefit.

## Ready for the Real World?

Having made a good case for the fairness and growth benefits of an X tax, the authors turn their attention to practical implementation issues. As should be the case under an ideal income tax, the authors urge — but do not insist — that employee fringe benefits lose their tax advantages. The value of employer-provided health insurance should be fully included in income. Contributions to retirement plans should be taxed, and withdrawals should be tax free.

Under an X tax, the disparate tax treatment of businesses based on legal form and filing status would be eliminated. Small sole proprietorships and multinational corporations alike would be subject to the business cash flow tax. All would be required to pay employee owners reasonable compensation. Losses would be allowed a five-year carryback and unlimited carryforwards with interest.

Financial intermediaries require special rules. To properly measure the consumption tax base, the authors propose that these businesses, in addition to complying with the normal business cash flow tax rules, be required to include cash flows from financial transactions with households (but not cash flows from transactions with other businesses). So amounts loaned to consumers would be deducted from the tax base, while interest and principal payments from mortgage and other consumer loans would be included. The practical difficulties with this treatment of the financial sector include distinguishing financial firms from nonfinancial firms, distinguishing consumer transactions from business transactions, and most of all, the one-time determination of the market value of existing assets and liabilities necessary to prevent massive transition problems.

On the international front, Carroll and Viard adopt a view that is nearly universally accepted by economists and nearly universally rejected by politicians. They argue that border adjustments — exemption of exports, tariffs on imports — that are common with VATs do nothing to improve trade competitiveness. If border tax adjustments do not matter, as economists claim, and politicians love them so much, most economists are willing to let lawmakers have their way rather than try to change their minds.

But Carroll and Viard are not indifferent. They make the rarely heard argument that the currency appreciation that inevitably accompanies any consumption tax with border tax adjustments will increase the burden of U.S. debt owned to foreigners. Contrary to the usual view that the United States must try to persuade other countries that

border tax adjustments under a return-based consumption tax should be permitted, the authors argue vigorously that ''we should not pressure other countries to modify trade agreements solely for the privilege of giving our wealth to other citizens.''

A consumption tax with border tax adjustments does not have transfer pricing problems. There is no incentive for funny business at the border, because exports are exempt and, ultimately, imports are fully taxed when sold to consumers in the U.S. market. But under the system that Carroll and Viard propose, businesses would have an incentive to undervalue exports to related parties in order to avoid tax. That is fundamentally the same problem we have now.

The authors propose a solution to the transfer pricing problem that is wildly different than current arm's-length pricing. Under it, all transactions with foreign related parties would be taxed on a cash flow basis. All payments to foreign affiliates would be deductible, and all returns would be subject to tax. That is similar to the cash flow approach Carroll and Viard use for financial firms. Besides how revolutionary the approach would seem to transfer pricing practitioners, it has serious transition problems that are not easily solved. If a consumption tax without border tax adjustments became law, we would probably still be stuck with the same transfer pricing problems that we have now.

**No Easy Transition**

For owner-occupied housing, the plan provides a simple approach. Proceeds from sales of new homes would be taxed, and proceeds from resales would be exempt. Unlike with the taxation of business under the cash flow tax, the prepayment method exempts returns on existing housing capital from tax. The authors deem this advantage to owners of existing homes relative to owners of existing business capital acceptable given the complexity of the alternatives and given the lost tax advantages, because repealing the income tax will drive down housing values.

The implications of income tax repeal would be enormous for state and local governments. States almost certainly would have to repeal their corporate and individual income taxes and impose their own X taxes that piggyback on the new federal levy. Also, municipal bonds would no longer be tax advantaged. Carroll and Viard suggest that if Congress wishes to continue subsidizing municipal bonds it can provide direct payments to bondholders in lieu of the exemption.

Probably the thorniest issue for any consumption tax is transition. It has significant implications for economic growth, for the distribution of the tax burden, and for administration. It also raises ethical issues. The absence of transition — by maximizing the one-time unanticipated hit on existing capital — would maximize economic growth, the progressivity, and the simplification benefits of an X tax. But many commentators look at the capital levy as harmful to the reputation of government and antithetical to the rule of law. And so without adequate transition relief, the capital levy aspect of consumption taxation may not be the magic bullet economists usually claim it to be, particularly when it comes to long-term economic growth.

***States almost certainly would have to repeal their corporate and individual income taxes and impose their own X taxes that piggyback on the new federal levy.***

Carroll and Viard suggest a middle path. They reject opportunistic taxes on capital already in place. But they believe there is no compelling reason why existing capital should be completely protected. They suggest that existing capital be allowed simplified deductions for capital recovery that are roughly equal to the present value of future depreciation deductions. They suggest that lenders continue to include interest on existing loans and bonds in income and that borrowers continue to deduct interest on existing loans but with a 20 percent haircut. The authors note that businesses currently have an estimated $2 trillion of unused net operating losses on their books, but they do not tell us their fate under the proposal.

**Partial Replacement**

One good thing about Carroll and Viard's book is its absence of ideology and its grounding in reality. They acknowledge on the first page that taxes may have to be raised. They acknowledge that other plans for replacing income taxes with consumption taxes would result in ''politically unacceptable regressivity.''

Unlike many other reform advocates, they do not overstate the simplification benefits of consumption taxation: ''Consumption taxation retains many complexities that are present under income taxation, including the need to distinguish between consumption and costs of earning income and the need to measure consumption services provided by financial intermediaries.'' They do not seek to eliminate the IRS. And they fully expect (although they do not condone it) that Congress will retain and add tax breaks if their plan is adopted. But these admissions do nothing to detract from one of the main advantages of their plan: the vast simplification resulting from the elimination of most tax rules pertaining to corporate and capital taxation.

Carroll and Viard are broad-minded enough to devote the book's last chapter to the leading alternative to their plan — a VAT that would partially replace income taxes. A VAT that completely replaced income taxes would deliver largely the same economic benefits as the authors' X tax. But a VAT could never be anything more than a partial replacement to the current income tax because of distributional implications, they write. A partial replacement VAT, the authors correctly argue, would deliver smaller economic gains and would probably increase rather than reduce tax complexity.

The authors acknowledge concerns about the possibility of a partial replacement VAT serving as a money machine that would fuel government spending. But they note that the evidence in support of this oft-stated claim is mixed. They explore solutions to the potential problem, including adopting procedural requirements that would make it tougher for Congress to increase spending and making the tax more visible by requiring VAT liability to be separately stated on receipts.

**The X Tax Challenge**

Liberals will instinctively shy away from any consumption tax proposal. And conservatives scoff at the high amounts of tax collected from businesses under the X tax. But here's a challenge for all X tax skeptics who profess a desire for reform: If the tax does promote growth and preserve the current distribution of the tax burden, what exactly is the problem? ■

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On April 30 Grassley wrote Treasury Secretary Timothy Geithner and IRS Commissioner Douglas Shulman to complain about the Miami trip, and he used the opportunity to express his impatience with the handling of his earlier complaints about the whistleblower program. (For Grassley's letter, see *Doc 2012-9420* or *2012 TNT 86-33*.)

Grassley objected to the fact that 19 IRS employees attended the *OffshoreAlert* conference, asking for justifications as well as expense breakdowns. He demanded that Whitlock be grounded, or at least that Shulman approve his travel.

Apparently, in the Midwestern mind-set, Miami is an impossibly exotic tropical paradise, instead of