

NOVEMBER 2013

WORKING PAPER

Implications of a Switch to a Territorial Tax System in the United States: A Critical Comparison to the Current System



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Contents

I.	Introduction and Executive Summary	1
II.	The Benchmark: The Current Structure of U.S. Corporate Taxation of Foreign Source Income	9
III.	A Stylized Territorial Tax System	10
IV.	The Impact of a Switch to the Stylized Territorial Tax System	11
A.	Impact of the Stylized Territorial System on Lock-Out Costs	13
1.	Current Lock-Out Costs	13
2.	Impact of a Switch to the Stylized Territorial System on Lock-Out Cost	15
B.	Impact of Switch to the Stylized Territorial System on Income Shifting	19
1.	Income Shifting under the Current Worldwide System	20
2.	Impact of a Switch to the Stylized Territorial System on Income Shifting	22
C.	Impact of Switch to the Stylized Territorial System on U.S. Tax Revenues	24
1.	Tax Revenues under the Current System	24
2.	Tax Revenues under Territorial	25
D.	Impact of Switch to the Stylized Territorial System on U.S. MNC Competitiveness	27
1.	Current Tax-Based Competitiveness	27
2.	Impact of a Shift to the Stylized Territorial System on MNC Competitiveness	28
E.	Impact of Switch to the Stylized Territorial System on Previously Accumulated Foreign Earnings	29
V.	Conclusion	32
VI.	Bibliography	35
	About the Authors	38
	About Berkeley Research Group	39

I. Introduction and Executive Summary

This paper examines the effects of a switch in the U.S. corporate tax system from the current worldwide tax system with deferral to a territorial tax system consistent with those used in other advanced industrial countries. The current U.S. system taxes all worldwide earnings of resident U.S. multinational companies (“MNCs”) while allowing credits for the foreign taxes they pay on their foreign earnings (“FTCs”). However, the active foreign source earnings of U.S. MNCs are subject to U.S. tax only if and when they are repatriated to their domestic parent entities in the United States. By contrast, all other G8 nations (and most other Organization for Economic Co-operation and Development (“OECD”) countries) now have territorial systems that largely exempt active foreign source earnings from home-country taxation.¹

The current U.S. system, along with a relatively high corporate tax rate, has features that both encourage U.S. MNCs to shift income out of the country to lower-tax jurisdictions and discourage U.S. MNCs from repatriating their active foreign source earnings to the United States. These profit-maximizing behavioral responses to the current system have negative effects on both the U.S. economy and the MNCs themselves. Income shifting leads to lower corporate tax collections and lower investment, production, and employment in the United States, to the extent that income shifting also involves moving real economic activity abroad. The undesirable consequences of deferred repatriation, commonly referred to as “lock-out” effects, include:

- **Less income available to finance economic activity in the United States:** Earnings held abroad by U.S. MNCs are locked-out of the U.S. economy in that they are not directly available to the MNCs for domestic uses. Were these earnings returned to the United States, they would boost overall domestic consumption and investment—both directly by the repatriating firms and indirectly through profit-maximizing shareholder behavior.
- **Lower U.S. corporate tax revenues:** Earnings held abroad by U.S. MNCs are locked-out of the U.S. corporate tax base. The U.S. Treasury collects no revenues on these earnings unless and until they are repatriated.²
- **Inefficient and costly use of corporate capital by U.S. MNCs:** Retaining earnings in foreign subsidiaries to avoid paying U.S. tax upon repatriation leads to a suboptimal and costly use of capital by U.S. MNCs. For example, they may use their earnings held abroad as “implicit collateral” to fund their economic activities in the United States, but the result may be a higher debt burden and higher borrowing cost. Or they may use these earnings to make investments abroad that provide a lower return than would otherwise be available in the United States but for the residual tax due upon repatriation (e.g., acquisition of lower-return foreign companies or investment in low-return financial instruments). Locked-out earnings are also not available to finance dividends or share buybacks that benefit shareholders in the United States; this could negatively affect company borrowing costs and share prices over time and could trigger conflict between management and shareholders.³

Our analysis focuses on the relative tradeoff between the anticipated benefits from eliminating these lock-out effects and the potential negative consequences from additional income shifting that may accompany a switch to a territorial tax system.

¹ England and Japan, the last two G8 countries to use a worldwide system, switched to a territorial system in 2009.

² Portfolio income generated from any passive investments of these earnings is, however, subject to current U.S. taxation.

³ Recent analysis of the effects of the 2004–2005 tax holiday on repatriations by U.S. MNCs indicates that such negative lock-out effects on the efficient use of MNC capital are significant and grow as the stock of accumulated foreign earnings held abroad increases (Grubert and Altshuler, “Fixing the System: An Analysis of Alternative Proposals For The Reform of International Tax” (2012)).

We compare the behavior of U.S. MNCs under the current system with their likely behavior under a stylized territorial tax system (characterized in more detail below). This point of comparison is an essential element of our analysis. We assess the expected benefits and costs from a switch to a territorial system *relative to the current system*, not on an absolute basis and not relative to some other system (such as a worldwide system without deferral).

As there is no single territorial tax system in use across the world, the stylized territorial tax system we use as the basis for our analysis incorporates the main characteristic that all territorial systems have in common: they exempt most active foreign source earnings from home-country taxation.⁴ Territorial systems differ, however, with respect to other significant elements, in particular the home-country corporate tax rate and anti-base erosion provisions. In this paper, we use a simple stylized territorial system to clearly evaluate the initial and likely future consequences of exempting active foreign source earnings of U.S. MNCs from most U.S. taxation. We expect that an actual territorial system implemented in the United States, like the systems in other advanced countries, would be a “hybrid” that incorporates effective base-erosion safeguards. But we believe that the analysis of a stripped-down territorial system that simply exempts most active foreign source earnings from U.S. taxation will provide useful guidance for the design of a hybrid territorial system for the United States. Table 1 summarizes how the stylized system that we evaluate treats the taxation of foreign source income and contrasts this treatment with the current U.S. tax system.

As part of their transition to territorial systems, the OECD countries, with the exception of Canada, have extended the territorial system to previously accumulated foreign earnings of their MNCs. Given the almost \$2 trillion of previously accumulated foreign earnings currently held abroad by U.S. MNCs, a switch by the United States to a territorial tax system must also include a transition plan for the taxation of these earnings. In this paper, we assume there will be a transition plan, and we estimate the economic impact of the repatriation of previously accumulated foreign earnings consistent with this plan. Our estimate assumes the transition plan will be similar to that proposed by U.S. House of Representatives’ Committee on Ways and Means Chairman Dave Camp as part of his overall territorial plan.⁵

Specifically, the transition plan used in our analysis assumes that 15 percent of the stock of previously accumulated foreign earnings (not previously subject to U.S. tax) would be included in the taxable income (whether or not repatriated) of U.S. MNCs, and a credit would be allowed for 15 percent of foreign income taxes paid with respect to this income.⁶ Should these earnings then be repatriated, they would face the same tax treatment as any other repatriated active foreign earnings in the new territorial tax system. Table 1 summarizes how the stylized system that we evaluate treats the taxation of both future and previously accumulated foreign source income and contrasts this treatment with the current U.S. tax system.

4 The majority of OECD countries that uses a territorial system exempt 100% of active foreign source earnings, while a minority exempts 97% or 95% of such earnings. See Business Roundtable, *Taxation of American Companies in the Global Marketplace: A Primer*, Exhibit 7 (April 2012).

5 See details of Chairman Camp’s proposal at the Committee on Ways and Means’ “Comprehensive Tax Reform” (<http://waysandmeans.house.gov/taxreform/>).

6 The plan calls for an 85% DRD on previously accumulated foreign earnings, with the remaining 15% taxed at the current 35% statutory U.S. tax rate. This results in an effective statutory rate of 5.25%. The plan also will allow firms to apply foreign tax credits against taxes owed, resulting in a lower effective rate.

Table 1: Comparison of Current Law and Stylized Territorial System

Category of Foreign Source Income/Expense	Treatment under Current System	Treatment under Stylized Territorial
Active Earnings of Foreign Incorporated Subsidiaries (e.g., CFCs) not subject to Subpart F	Taxed at 35% statutory corporate tax rate less FTCs. Taxes are deferred until the earnings are received by the U.S. parent as a dividend (i.e., repatriated).	35% U.S. statutory rate on repatriated earnings with 95% Dividend Received Deduction. (Implies effective rate of 1.75%).
Foreign Source Income other than Dividends (i.e., income received as a direct payment such as royalties and interest)	Taxed in U.S. as earned, but can be shielded from U.S. tax by excess FTCs on active income (i.e., cross-crediting).	Taxed in U.S. as earned. Cannot be shielded from tax due to elimination of FTCs on active income.
Branch Income	Taxed in U.S. as earned at statutory rate less FTCs.	No change from current treatment.
Subpart F Income such as investment income	Taxed in U.S. as earned at statutory rate less FTCs unless excluded under high-tax exemption.	No change from current treatment.
Anti-Base Erosion Provisions (other than Subpart-F)	Various including transfer pricing rules, economic substance requirements and associated penalties, numerous limitations on FTCs, taxation of outbound transfers of IP under section 367(d).	No change to the extent that any existing provision continues to be applicable and relevant.
Parent Overhead and Interest Expense	Fully deductible against MNC parent income. Portion allocable to CFCs impacts FTC limitation.	Fully deductible against MNC parent income.
Previously Accumulated Active Earnings of CFCs	Taxed at U.S. statutory corporate tax rate less FTCs when repatriated.	Total amount taxed at 35% U.S. statutory rate, less FTCs, with an 85% Dividend Received Deduction (Implies total amount taxed at 5.25% less any FTCs). These earnings are then treated as any other active foreign source earnings upon repatriation (i.e., taxed at an effective rate of 1.75%).

In our analysis, we distinguish between indefinite deferrers (“IDs”)—firms that have ready access to capital markets and find indefinite deferral of some portion of their active foreign source earnings to be a rational profit-maximizing decision—and non-indefinite deferrers (“NIDs”)—firms that have limited access to capital markets and do not find indefinite deferral of their active foreign source earnings to be profit-maximizing. This distinction between firms based on their ability to defer earnings is essential, because a switch to the territorial system we evaluate will affect firms differently within each category. Based on the findings of a recent study by the Joint Committee of Taxation (“JCT”), we assume that IDs account for about 70 percent and NIDs about 30 percent of the active foreign source earnings of U.S. MNCs.⁷

⁷ See section IV, “The Impact of the Switch to the Stylized Territorial Tax System.”

Our analysis also distinguishes between income shifting involving the movement abroad of real productive activities that currently reside in the United States (“*job shifting*”) and income shifting involving tax avoidance practices including transfer pricing and the relocation of IP assets that currently generate income taxable in the United States (“*IP shifting*”). This distinction is important because *IP shifting* affects only U.S. tax collections, while *job shifting* leads to less real activity in the United States by U.S. MNCs. This distinction is often overlooked by critics of a territorial system.

Both *job shifting* and *IP shifting* are sensitive to differences between the U.S. and foreign corporate tax rates—a sensitivity that has strengthened over time as these rate differences have increased and as technology has enabled dispersed global supply chains.⁸ Both types of income shifting have also increased over time as mobile intangible capital have become more important determinants of the income of U.S. MNCs. However, while the primary motivation for *IP shifting* is a lower foreign tax rate, *job shifting* is in many cases influenced primarily by non-tax factors that will not be impacted by a switch to a territorial tax system.⁹

A recent report on trends in the location of the worldwide activity of U.S. MNCs, as measured by real economic indicators such as sales, value-added and physical assets, and net income, found that high-tax foreign locations such as Germany, the United Kingdom, and Canada are the leading foreign locations for the real economic activities of U.S. MNCs, but are not the main foreign locations for their net income.¹⁰ This result is consistent with several studies that find an increased segregation between the locations where actual business activities of MNCs occur and the locations where their profits are reported for tax purposes. These findings apply to MNCs headquartered in the United States with its current worldwide system and to MNCs headquartered in countries with territorial tax systems. Overall, these findings confirm that tax considerations are more powerful incentives for *IP shifting* than for *job shifting*,¹¹ and that *IP shifting* has grown in importance in both systems over time.

Based on our analysis, we reach the following conclusions:

- ***A switch to the stylized territorial system, inclusive of the transition treatment of previously accumulated foreign earnings, evaluated in this paper will materially increase repatriation of the active foreign source earnings of U.S. MNCs and will reduce the lock-out effect of the current system on the availability of these earnings to support economic activity in the United States.***

Based on prior research, we find that increased repatriation of foreign earnings that would otherwise be indefinitely deferred will positively and significantly impact the U.S. economy.¹² Specifically, we find that increased repatriation will increase the domestic investment activity of some U.S. MNCs and lead others to increase payouts to their shareholders. This latter use of repatriated funds will lead in turn to increased consumption and a beneficial reallocation of investment capital.

8 Reducing the corporate tax rate in the United States to a level comparable to that in the other OECD countries would reduce the incentives for both kinds of income shifting in both tax systems. Camp’s plan for a territorial system includes a revenue-neutral cut in the corporate tax rate to 25%.

9 Improving access to foreign markets and reducing the costs of production, especially labor costs, are the primary determinants of *job shifting* decisions by U.S. MNCs, but corporate tax considerations can also play a role in influencing *job shifting*, especially in low-tax foreign jurisdictions that provide large markets, low-cost production inputs, reliable investment climates, and supporting infrastructure. Many low-tax foreign locations that are attractive locations for *IP shifting*, however, do not have such conditions and are not attractive locations for *job shifting*.

10 See McKinsey Global Institute, “Growth and competitiveness in the United States: The role of its multinational companies” (2010).

11 OECD, *Addressing Base Erosion and Profit Shifting*, OECD Publishing (February 12, 2013).

12 Tyson, L., K. Serwin, and E. Drabkin, *The Benefits for the U.S. Economy of a Temporary Tax Reduction on the Repatriation of Foreign Subsidiary Earnings*, BRG Working Paper (2011).

Using the most current firm-specific data available about the total amount of previously accumulated active foreign source earnings indefinitely reinvested abroad by U.S. MNCs, we estimate that transition to a territorial system will lead U.S. MNCs to repatriate about \$1 trillion from these earnings (about half of the total).¹³ This additional repatriation will increase domestic consumption and investment. We estimate that the additional consumption and investment will lead to a one-time increase in U.S. GDP by at least \$208 billion and create at least 1.46 million new U.S. jobs. Following the transition, we estimate that the treatment of foreign source earnings in the stylized territorial system will increase annual repatriations by about \$114 billion, leading to an increase in U.S. GDP by at least \$22 billion per year and to the creation of at least 154,000 new U.S. jobs per year.¹⁴

- ***We do not expect that the U.S. tax base or employment base will be substantially reduced from either IP shifting or job shifting as a result of a switch to the stylized territorial system.***

A switch to the stylized territorial system will strengthen tax-based incentives for *IP shifting* by U.S. MNCs that do not face comparable incentives under the current system. However, for many U.S. MNCs, particularly IDs, the current system already contains powerful incentives for income shifting, and these incentives have become stronger as foreign corporate tax rates have declined. Additionally, as a result of lower foreign tax rates and recent restrictions on separating FTCs from the earnings that generate them (i.e., anti-splitting rules), fewer FTCs will be available to shield the foreign royalty income of U.S. MNCs from U.S. taxation in the future. As U.S. MNCs lose the ability to shield royalty income with excess FTCs, the incentive to shift this income abroad will grow.

The incremental *IP shifting* that a switch to the stylized territorial system will encourage is not expected to have a large negative impact on corporate tax revenues. Most of the expected additional *IP shifting* will be carried out by firms that currently do not pay U.S. tax on foreign royalties received, because they use excess FTCs to shield much of this income from taxation.¹⁵ *IP shifting* that moves shielded royalty income out of the United States will not result in lower tax collections. In fact, U.S. tax revenues will initially increase as a result of a switch to the stylized territorial system, because previously untaxed royalty income is not immediately mobile and will become subject to U.S. tax.¹⁶

We also do not anticipate that a switch to the stylized territorial tax system will materially increase the incentives for *job shifting*. U.S. MNCs decide whether to locate their real economic activities outside the United States based primarily on market access and access to low-cost inputs. A switch to a territorial system will not affect these factors. Even under the current system, it is reasonable to assume that U.S. MNCs have already shifted economic activities from the United States

13 Some critics argue that the return of locked-out monies will not substantially benefit the U.S. economy because much of what we refer to as accumulated foreign earnings held abroad is already present in and arguably benefiting the U.S. economy. This argument is based on the fact that a significant portion of these monies are held in U.S. dollar-denominated liquid assets (e.g., U.S. bonds) and/or as deposits in U.S. institutions (e.g., banks). The apparent suggestion is that repatriation will shift these assets out of U.S. bonds or U.S. bank deposits to the other uses we describe (e.g., direct investment and distributions to shareholders), and that the gains associated with these other uses will be offset by losses associated with the movement out of bonds and/or deposits (through increased interest rates or through decreased bank lending). We do not believe any offsetting effects from liquidation of current holdings will materially impact the gains we expect. Given the current stance of the U.S. Federal Reserve regarding expansionary monetary policy, as well as the likely reinvestment of a portion of funds distributed to shareholders into U.S. treasuries, we do not anticipate that a material increase in interest rates will arise from any shift of assets associated with repatriation. Moreover, any reduction in bank deposits that may be associated with repatriation will only reduce the massive overhang of excess reserves currently held by U.S. banks and would not have any impact on U.S. bank lending. Regardless of the physical location or current holding of the deferred foreign earnings, for expository ease throughout the remainder of this paper we refer to them as “being held abroad.”

14 Our results are based on 2012 economic data, the most current available. See sections IV.A.b and IV.E for a description of how these results are derived.

15 See section IV.2, “Impact of a Switch to the Stylized Territorial System on Income Shifting,” for a discussion of the various incentives to shift IP assets faced by different U.S. MNCs depending primarily on whether they can indefinitely defer repatriation of foreign earnings under the current U.S. tax system.

16 If U.S. MNCs want to move abroad their existing IP assets—which are the basis of these royalties—the U.S. parent must “sell” the asset to its foreign subsidiary. Such a sale would involve compensatory payments from the subsidiary to its U.S. parent, and these payments would be subject to U.S. corporate tax. There would also be taxable income in the United States for foreign cost-sharing in the development of new IP assets in the country. To the extent such payments correctly compensate for the value of these assets, the tax-based motive for *IP shifting* of such existing IP assets will be largely dissipated.

to foreign locations when the benefits of greater access to foreign markets and/or lower production costs outweigh the often substantial costs associated with *job shifting* (e.g., establishing and operating foreign subsidiaries).

Under the current tax system, the difference between the U.S. corporate tax rate and lower tax rates in other countries provides an additional incentive for *job shifting* activities by IDs that can earn income as a result of this difference and can protect that income from additional U.S. taxation through deferral. It is reasonable to assume that IDs have already made investment decisions about the location of their real economic activities to take full advantage of the current system. Following a switch to the stylized territorial system, *job shifting* investments that were not sufficiently profitable under the current system because of the lock-out costs associated with deferral may become profitable for such firms, but the overall effect on additional *job shifting* by these firms will likely be small.

The stylized territorial system will strengthen the tax incentives for *job shifting* by NIDs that cannot take advantage of deferral under the current system. In the stylized territorial system, NIDs will have additional opportunities to earn income from activities in lower-tax foreign locations and protect that income from U.S. taxation even when the income is repatriated to the United States. However, we do not expect that there will be a large increase in *job shifting* investments by NIDs. It is reasonable to assume that such firms have made and will continue to make decisions about the location of their real economic activity based primarily on market access and cost considerations. To the extent that these firms have chosen not to locate their real economic activities in low-tax jurisdictions in the current system, it is largely because these jurisdictions are tax havens for income shifting and do not provide the market size, availability of inputs, and supporting infrastructure that are the major drivers of *job shifting* decisions. As noted above, the tax rates in countries that have features conducive to *job shifting* activities by U.S. firms tend to be relatively high, and this implies that the increment to such activities by NIDs after a switch to the stylized territorial system will likely be small.

- ***Initially, a switch to the stylized territorial system will, on net, reduce the lock-out effect of the current system on U.S. tax revenues, and corporate tax revenues will increase. The effects on future tax revenues, however, are uncertain and depend on incremental income shifting that may occur. Any such shifting over time in turn depends on both ongoing changes that strengthen the incentives for income shifting in the current system and potential anti-base erosion provisions that could be added to the territorial system.***

There is a wide variance in estimates of the likely tax revenue impact from a switch to a territorial tax system. This variance is the result of the specific design features of the territorial system analyzed, the data set employed in the analysis, and the assumed behavioral responses by MNCs to the switch. For example, the U.S. Treasury has estimated that a territorial system without expense allocation rules could cost \$130 billion over the 10-year budget, while the JCT has estimated that a territorial system with expense allocation rules would raise \$76 billion over the 10-year budget window.¹⁷

In this paper, we provide an estimate of the initial impact on U.S. tax revenue of a switch to the stylized territorial system. We estimate that the transition tax on previously accumulated foreign earnings will yield approximately \$80 billion in new tax revenue and that the stylized territorial system will yield initial annual tax revenue increases of about \$17 billion.¹⁸ The components of these changes in tax revenue are shown in Table 2.

¹⁷ The President's Economic Recovery Advisory Board, *Report on Tax Reform Options: Simplification, Compliance, and Corporate Taxation* (August 2010); and Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* (March 2011).

¹⁸ Our estimate is based on the most current data available and is consistent with the findings of other researchers. Gravelle (2012) suggests that a switch to a territorial system could be revenue enhancing unless the tax rate on royalties is reduced or the switch results in "pronounced income shifting responses." (Gravelle, Jane, "Moving to a Territorial Income Tax: Options and Challenges," Congressional Research Service Report R42624 for Congress (July 25, 2012)). Grubert (2001) and Grubert and Altshuler (2012) find that the immediate impact on tax revenue of a switch to a territorial system will be essentially neutral to slightly positive, depending on the assumptions made with respect to the features of the system evaluated.

Table 2: Estimated Initial Revenue Effects

	Incremental Increase in Tax Revenues (\$Billions)	Incremental Decrease in Tax Revenues (\$Billions)	Net Incremental Change in Tax Revenues (\$Billions)
Annual Impact (Absent Income Shifting)			
Tax on Existing Annual Repatriation (NIDs)		(\$2.08)	
Tax on Existing Annual Repatriation (IDs)	\$1.15		
Tax on Additional Annual Repatriation (IDs)	\$2.00		
Tax on Annual Royalty Streams	\$15.57		
Total Annual Change	\$18.72	(\$2.08)	\$16.64
One-Time Transition Impact			
Tax on Accumulated Foreign Earnings	\$62.50		
Tax on Repatriated Accumulated Foreign Earnings	\$18.00		
Total One-Time Change	\$80.50		

Over time, the initial annual tax revenue gains from a switch to the stylized territorial tax system could substantially diminish, and may even decrease relative to the current system, as a result of incremental *IP shifting*. That said, the magnitude of any decrease in future tax revenues cannot be quantified without a series of speculative assumptions, and few analysts undertake this exercise. As noted above, the two studies that attempt to quantify the long-run impact of a switch to a territorial system on corporate tax revenues (i.e., studies by the Treasury and JCT) vary widely in their findings given their differing sets of assumptions. Most critics of a territorial system simply assert that it would strengthen the incentives for income shifting by U.S. companies and that tax collections would decline substantially as a result.¹⁹

While we do not quantify the long-run revenue impact, we do believe incremental *IP shifting* and the corresponding reduction in corporate tax revenues over time will be smaller than most critics fear. Most of the incremental *IP shifting* expected to follow a switch to the stylized territorial system will affect royalty flows that are currently untaxed because they are shielded by excess FTCs. As this income becomes taxable, MNCs may seek to transform their newly taxed royalty income into tax-exempt dividends. Such *IP shifting* will reduce tax revenues over time and offset the initial revenue gains from the switch to the territorial system. But the loss in revenues will not be a loss relative to the current system, because the income shifting involves income shielded from tax in the current system by the use of excess FTCs.

Additionally, we do not expect all currently taxed royalties to be converted to untaxed dividends. We expect only NIDs to convert currently taxed royalty income to dividends under the stylized territorial system; if IDs found such a conversion profitable, they would be in a position to do so under the current system. Under the current system, NIDs have limited incentives to shift IP assets and corresponding royalty income abroad because residual U.S. taxes upon repatriation of that income would obviate the tax savings from lower foreign tax rates. Since the residual tax would be reduced under this

¹⁹ These critics often cite the Treasury study to support their claims. Other proposals, however, contain provisions distinctly different from the assumptions made by the Treasury (e.g., differing percentages of dividends exempt from repatriation tax) and would have very different effects.

territorial system, the incentives for NIDs to convert royalty income to dividends may change. Assuming that NIDs' share of the currently taxed royalties is proportional to their share of foreign earnings, about 30 percent of currently taxed royalties may be converted to untaxed dividends through *IP shifting* under this territorial system.

Finally, it is not possible to quantify the likely tax revenue effects of a switch to a territorial system, because most proposals for adopting such a system in the United States include additional anti-base erosion rules to limit income shifting. Developed countries that have adopted hybrid territorial systems already have such rules and are evaluating additional measures to prevent their MNCs from using transfer pricing and leverage strategies to shift their income to tax havens. In addition, the incentive for income shifting under a territorial system in the United States would depend on the U.S. corporate tax rate compared to the corporate tax rates in the other countries. The gain to a U.S. MNC from shifting a dollar of income from the United States to a foreign location depends on the difference between the statutory corporate tax rate in the United States and in that location. A lower statutory corporate tax rate and any anti-base erosion rules that accompany a switch to a territorial system in the United States would have a significant effect on both the incentives for income shifting and on the corporate tax revenues collected in such a system over time.

- ***A switch to the stylized territorial system will enhance the tax-based competitiveness of some, but not all, U.S. MNCs. The competitiveness of U.S. MNCs that currently defer little or none of their active foreign source earnings (i.e., NIDs) will most likely be enhanced. U.S. MNCs that currently defer a substantial portion of foreign source earnings (i.e., IDs) will benefit from a reduction of lock-out costs. To the extent that these benefits are not offset by higher taxes on royalty or other foreign source income as a result of the switch, the reduction in lock-out costs will increase the competitiveness of these firms.***

A switch to the stylized territorial system will reduce the corporate tax burden on NIDs and increase their competitiveness relative to their foreign counterparts headquartered in countries with territorial systems and lower corporate tax rates. This increase in competitiveness will benefit both the firms and the broader economy. Following a switch, NIDs will be more profitable due to lower taxes on foreign earnings. NIDs will likely use these additional profits to increase investment, both domestically and internationally. Increased domestic investment will directly stimulate the U.S. economy. Increased foreign investment may indirectly stimulate the U.S. economy given the many complementarities between FDI and the domestic activities of U.S. MNCs. Moreover, insofar as NIDs are currently undervalued relative to comparable foreign firms that operate under a territorial system, NIDs may be vulnerable to takeover by investors in countries with territorial systems. A switch to the stylized territorial system would reduce this vulnerability to takeover.

IDs, on the other hand, can currently defer repatriation and take advantage of other beneficial aspects of the current tax system, and they face little if any residual U.S. tax on their active foreign source earnings. The ability to defer repatriation indefinitely and take advantage of other features in the tax code allow IDs to operate as if they were headquartered in a territorial system, and their effective tax rates under the current system are significantly below the statutory U.S. corporate tax rate.

Deferral, however, is not costless. Costs of deferral have been empirically estimated by some researchers to be around 1 percent and have been hypothesized to up to 7 percent of deferred earnings, depending on the number of years the income is retained.²⁰ These costs result from a suboptimal corporate capital structure, including the inefficient use of deferred earnings and excessive leverage, and from the costs of establishing and maintaining a worldwide tax strategy—costs that can be substantial. According to Rosanne Altshuler:

²⁰ See Grubert and Altshuler (2012).

... arranging affairs to avoid taxation of foreign earnings is costly... The result is a system that distorts business decisions, treats different multinationals differently, and encourages wasteful tax planning.²¹

Thus, a switch to the stylized territorial system will not likely increase the tax-based competitiveness of the IDs. In fact, IDs that currently shield a large portion of their foreign source royalty income with excess FTCs—royalty income that will be subject to tax under this territorial system—could experience a net tax increase. The net impact on competitiveness depends on whether the increase in tax on foreign source royalty income is greater than the reduction in lock-out costs.

The stylized territorial system will reduce these lock-out costs. Active foreign source earnings that cost more than 1.75 percent to hold abroad will be repatriated, eliminating lock-out costs in excess of this amount. Thus, even if the territorial system does not significantly reduce (or even increases somewhat) the tax burden of many IDs, the removal of the lock-out cost will allow many firms to operate more efficiently and will reduce the firm-level lock-out costs associated with deferral.

It has also been suggested that a territorial system will be less complex and thus less expensive to administer.²² We agree that to the extent a territorial system is limited to dividend exemption without FTCs, it will be less complex and likely less expensive to administer. This conclusion, however, depends on the specific features of the territorial system; if it includes extensive anti-base erosion rules and/or expense allocation rules, it may be at least as complex and costly to administer as the current system.

The remainder of this paper is structured as follows. In sections II and III, we briefly describe the current U.S. tax system and stylized territorial tax system. In section IV, we evaluate a switch to the stylized territorial tax system by examining the impact of such a switch on i) the current lock-out of foreign income of U.S. MNCs from the U.S. economy, ii) the incentives and potential for incremental income shifting, iii) short- and long-term tax collections, iv) the competitiveness of U.S. MNCs, and v) the impact on previously accumulated foreign earnings. We provide conclusions in section V.

II. The Benchmark: The Current Structure of U.S. Corporate Taxation of Foreign Source Income

The structure the United States currently employs to tax the foreign earnings of U.S. MNCs provides the benchmark against which to evaluate the impact of a shift to a territorial system.²³ Under this system, the Internal Revenue Service (“IRS”) may tax the earnings of U.S. firms, regardless of the country where they are earned. Taxes owed by U.S. MNCs on the active foreign source earnings of a foreign subsidiary are due, however, only when those earnings are returned (or “repatriated”) to the U.S. parent.²⁴ Thus, U.S. MNCs can defer payment of U.S. taxes due on active foreign source earnings until those earnings are repatriated to the United States.

21 U.S. Senate Budget Committee, *Testimony of Dr. Rosanne Altshuler before the Senate Committee on the Budget* (February 2, 2011).

22 The President’s Council on Jobs and Competitiveness (2012) wrote that “[b]ecause of its complexity and its incentives for tax avoidance, the U.S. corporate tax system results in high administrative and compliance costs by firms - costs estimated to exceed \$40 billion per year (or more than 12% of the revenue collected)” (*Road Map to Renewal* (January 2012)).

23 Ignoring or overlooking the specific details of the current system and the behavioral incentives this system produces will create a false or misleading baseline that does not allow for a fair discussion into the relative merits of any particular reform to the system.

24 *Active income* is essentially income earned through business activity. *Passive income* is income that derives from activities in which the recipient is not directly involved, such as investment income. Unlike with the treatment of active income, taxes on passive income are due when this income is earned; no deferral of taxes is allowed. Anti-deferral rules are defined in subpart F enacted by Congress in 1962 to prevent the shifting of income to so-called tax havens. These anti-deferral rules target passive income and income that is split off from the activities that generated that income. Subpart F also requires current taxation of active business income that is easily shifted to a tax haven, such as shipping income.

To avoid the double taxation, the United States allows an MNC to credit the foreign taxes paid on these earnings against its U.S. tax liability.²⁵ Use of FTCs by U.S. MNCs is limited to the total amount of U.S. tax that would otherwise be owed on those earnings had they been earned in the United States (i.e., 35 percent). As a result of this limitation, U.S. MNCs sometimes accumulate FTCs in excess of those they can apply to a given source of repatriated foreign earnings. Excess FTCs earned on one specific flow of foreign earnings can be applied to other foreign source income in the same category (i.e., either active or passive).²⁶ This use of excess FTCs is referred to as “cross-crediting.”²⁷ According to a recent Congressional Budget Office (“CBO”) study, in 2008 U.S. MNCs claimed about \$100 billion in FTCs on almost \$700 billion in worldwide taxable income, and these credits reduced those firms’ income tax liability by about 40 percent.²⁸

Overall, the ability to defer repatriation and use cross-crediting under the current tax system reduces U.S. tax liabilities and provides tax-based motivations for MNCs to shift income outside the United States. Thus, the evaluation of a proposed switch to a territorial system must take into account the fact that the current system already contains strong tax-based income-shifting incentives for U.S. MNCs.

III. A Stylized Territorial Tax System

The stylized territorial system we evaluate in this paper is characterized by the following main features:

- A 95-percent dividends received deduction (“DRD”) for dividends of active earnings received from controlled foreign corporations (“CFCs”). A 95-percent DRD is used by several other OECD countries with territorial tax systems: Japan, Germany, France, Italy, and Belgium.
- No FTCs available for use against dividends qualifying for the 95-percent DRD. Withholding taxes would be creditable for other dividends as under present law.
- No FTCs available for use against current payment income currently included in the active source category (e.g., royalty and export income).
- The current branch income rules would remain unchanged (i.e., branch income would not receive the 95-percent DRD).
- The current anti-deferral rules (e.g., subpart F income) would remain unchanged.

25 The U.S. tax due is based on the residual (or difference) between the U.S. foreign tax rates. For example, if the U.S. MNC earns income in Canada where the corporate tax rate is 15%, then residual U.S. tax is based on 20% of the foreign income.

26 Foreign income of U.S. MNCs is categorized as either *active* or *passive*. FTCs from income in either category can be used against other income in that same category. The calculation of the FTC limit also requires the allocation of the overhead expenses of the parent to the foreign income on which the credits are being claimed. Allocating expenses reduces the amount of foreign tax that can be claimed. This only impacts firms in an excess credit position; if a firm has more FTCs than can be claimed, allocation will reduce their excess credits. If a firm is in an excess limit position, allocation will have no impact on U.S. tax collections.

27 For example, suppose a U.S. firm has controlled foreign corporations (“CFCs”) in two countries: one with a 40% corporate tax rate (the “high-tax” country) and one with a 15% tax rate (the “low-tax” country). If each of these CFCs generates \$100 in income, a total of \$55 would be paid to foreign taxing authorities (\$40 to the high-tax country and \$15 to the low-tax country). The U.S. parent is limited to a \$35 FTC for earnings in either country (or 35% of \$100). This MNC can, however, apply the “excess” tax credit of \$5 from tax paid on income in the high-tax country to the \$100 of income from the low-tax country. Thus, if this MNC repatriated the total \$200 in foreign income, it would face a U.S. tax liability of \$70, to which it could apply the total \$55 tax credit—leaving it with a residual U.S. tax owed of \$15. In this case, had the MNC chosen to repatriate only the \$100 in earnings from the high-tax country, the excess \$5 FTC could be used to shield other low-taxed streams of active foreign source income such as royalty income or export earnings. Alternatively, the excess \$5 FTC can be “banked” and used to offset taxes in future years.

28 CBO, “Options for Taxing U.S. Multinational Corporations” (January 2013).

- Current anti-base erosion rules (e.g., transfer pricing rules, limitations of FTCs, and taxation of outbound transfers of IP)—to the extent relevant under the stylized territorial system—would remain unchanged.
- No change in existing indirect expense allocation rules. Thus, expenses incurred by a U.S. parent in support of a CFC will be deductible against U.S. income.²⁹ The U.S. tax on the non-exempt portion of dividends received (5 percent) may be considered to operate as a substitute for denying deductibility of domestic expenses incurred to generate exempt foreign dividend income. This approach is consistent with that of the other five OECD countries—Belgium, France, Germany, Italy, and Japan—that provide a 95-percent DRD.
- Previously accumulated foreign earnings that have been held abroad by U.S. MNCs and that have not been taxed in the United States will be afforded an 85-percent DRD, with an allowance of 15 percent of FTCs accrued. Thereafter, these monies can be repatriated under the same 95-percent DRD afforded to any other repatriated active foreign source earnings. This transition plan is consistent with one proposed by House Ways and Means Committee Chairman Dave Camp.

Proposals to reform the current U.S. corporate tax system and move to a territorial tax system usually also include a lower U.S. corporate tax rate and anti-base erosion rules. Such elements would discourage income shifting, a major concern raised by opponents to a switch. Anti-base erosion rules seek to address this concern by regulating or restricting a firm’s ability to shift income to so-called tax havens or by making certain types of income non-exempt from domestic taxation. A reduction in the U.S. tax rate would also serve to diminish tax-based incentives to shift income abroad. The other OECD countries with territorial systems have significantly lower statutory corporate tax rates than the United States, and their “hybrid” territorial systems have additional measures to prevent income shifting and tax-base erosion.

Notwithstanding the fact that implementation of a territorial tax system would likely include a lower corporate tax rate and anti-base erosion provisions, in this paper we confine our analysis to an evaluation of the stylized territorial system defined above. We recognize, however, that tax-based behavioral incentives to shift income abroad would likely be blunted under a more realistic “hybrid” territorial tax system comparable to those adopted by other countries.

IV. The Impact of a Switch to the Stylized Territorial Tax System

Proponents of a switch to a territorial tax system mainly focus on two expected benefits: reduction of the so-called lock-out effects associated with the current system of deferral; and an increase in the competitiveness of U.S. MNCs vis-à-vis their foreign competitors that operate under a home-country territorial tax system. Opponents of a switch to a territorial tax system dispute the likelihood and size of such benefits. Moreover, opponents argue that a switch will exacerbate certain problems already associated with the current tax system; primarily that a switch to territorial will strengthen incentives for U.S. MNCs to shift income and activities abroad to take advantage of lower foreign tax rates.

Our discussion of the likely economic effects of a switch to the stylized territorial system evaluates the two purported benefits (reduction of lock-out costs and increased competitiveness) relative to the potential costs (increased income shifting and reduced U.S. tax revenues). We focus on how such a switch would impact the economic incentives faced by U.S. MNCs.

²⁹ Currently, while all expenses are deductible against U.S. taxes, expenses must nevertheless be allocated against foreign earnings. Allocating expenses reduces the amount of foreign tax that can be claimed as an FTC. This only impacts firms in an excess credit position; if a firm has more FTCs than can be claimed, allocation will reduce their excess credits. If a firm is in an excess limit position, allocation will have no impact on U.S. tax collections.

It is important to note that the effects of such a switch would not be uniform across firms. In particular, one of the most salient characteristics that differentiate likely economic responses is an MNC's current ability to defer repatriating foreign earnings.

Under the current tax system, U.S. MNCs can avoid paying residual tax on foreign earnings by retaining those earnings outside the United States. If an MNC indefinitely defers payment of the residual tax, then its tax burden is essentially the same as if it operated under a territorial tax system. The tax-based economic incentives facing such firms in the current system are similar to those they would face in the territorial system. If deferral is not currently economically feasible or justified, the taxes paid by an MNC on its foreign earnings include residual taxes owed in the United States. In these cases, a switch to a territorial system would likely change the MNC's tax-based economic incentives. The ability of an MNC to defer repatriation under the current system is thus a key factor in understanding its likely behavioral response to a switch to the stylized territorial system.

A second major characteristic that will affect an MNC's behavioral response is its ability to shield foreign source income from current U.S. tax liability with excess FTCs.³⁰ The more an MNC can currently shield foreign source income with excess FTCs, the more likely its tax-based economic incentives will change following a switch to the stylized territorial tax system that eliminates FTCs on active foreign income. For example, if an MNC currently uses excess FTCs to shield royalty income from abroad, its tax liability would increase following a switch to the stylized territorial system. This increased tax liability changes the economic calculus for such an MNC with respect to its decisions about where to domicile its IP assets.

The abilities to defer repatriation and use cross-crediting to shield certain foreign source income are key factors driving the tax-motivated incentives of U.S. MNCs under the current system. We therefore focus on differences between U.S. MNCs with respect to these abilities—a focus consistent with that of other economists who have evaluated the economic effects of a switch to a territorial tax system (e.g., Grubert, 2001; Markle, 2011).

The ability of an MNC to defer repatriation is in part dependent on the costs it faces to substitute borrowed capital for its own active foreign source earnings for required or desired domestic uses. We assume that the greater an MNC's access to credit markets (i.e., the more inexpensive it is for the firm to borrow domestically) to meet its domestic (U.S.) financial needs, the more likely the MNC will retain active foreign source earnings outside the country and the longer it will likely hold such earnings abroad.³¹

We distinguish between indefinite deferrers (“IDs”)—firms that have ready access to capital markets and find indefinite deferral of some portion of their active foreign source earnings to be a rational profit-maximizing decision—and non-indefinite deferrers (“NIDs”)—firms that have limited access to capital markets and do not find indefinite deferral of their active foreign source earnings to be profit-maximizing.

The rationale for categorizing MNCs as either IDs or NIDs is to distinguish firms that would be expected to repatriate their foreign income within a relatively short time period from those firms that can, and do, take advantage of deferral to hold

³⁰ Our use of the term “excess FTCs” refers to the situation where a U.S. MNC has paid more in foreign tax on repatriated foreign income than is allowed under the FTC limitation on those same dividends. In this case, the firm has excess credits to use against other active foreign source income, such as royalty income.

³¹ Basing the ability to defer repatriation on the costs of financing domestic operations through borrowing is consistent with Grubert and Altshuler (2012). They assume that U.S. MNCs borrow against the implicit collateral of their retained foreign earnings. They model the costs associated with such borrowing as increasing in the cumulative magnitude of those retained foreign earnings.

the bulk of their active foreign source earnings abroad. We estimate the relative split between these two groupings based on a study conducted by the JCT in its recent assessment of corporate tax revenue losses that would result from another tax holiday on repatriations.³²

In its study, the JCT estimated the total amount of repatriation that would occur under a temporary 85-percent DRD. It then estimated how much of this total was simply “accelerated” from the future—that is, how much was going to be repatriated over the next 10 years but would be accelerated in order to take advantage of the tax holiday. The JCT estimated that with an 85-percent DRD, about \$700 billion would be repatriated, \$200 billion of which was accelerated repatriation that would have occurred over the next decade. This implies that \$500 billion would not be repatriated in the absence of another tax holiday for at least another decade. The JCT findings provide a reasonable basis to estimate the percentage of foreign income that accrues to NIDs and IDs, respectively. In our analysis, we assume that about 70 percent of active foreign source income is earned by IDs and 30 percent by NIDs.

The ability to use cross-crediting to shield certain types of foreign source income, especially royalty and export income, from U.S. taxes is dependent on a firm’s ability to accumulate excess FTCs. In this paper we assume that U.S. MNCs accumulate enough excess FTCs to shield about 50 percent of annual royalty income received from abroad. This estimate is loosely based on research by Grubert and Altshuler (2006), who estimate that in 2000 excess FTCs shielded from U.S. tax about two-thirds, or about 67 percent, of the \$45.1 billion in royalty payments (net of allocable deductions) received by U.S. MNCs. We assume, however, that the growing gap between the United States and foreign corporate tax rates since 2000 and the recently enacted (2010) “anti-splitter” rules have made it more difficult for U.S. MNCs to accumulate excess FTCs that can shield royalty or export income.³³

We evaluate the likely impact of a switch in the United States to the stylized territorial tax system by explicitly accounting for differences between U.S. MNCs in terms of their abilities to defer repatriation and employ excess tax credits to shield foreign source current payment income (e.g., royalty and export income). In our analysis, we assume that about 70 percent of foreign source income is earned by IDs, with the rest earned by NIDs, and that MNCs currently shield about 50 percent of foreign source royalty income from the United States through FTCs. Based on these assumptions, we evaluate the impact of the stylized territorial system on (i) the repatriation of foreign earnings, (ii) the potential for increased income shifting, (iii) U.S. tax collections, and (iv) the tax-based competitiveness of U.S. MNCs.

A. *Impact of the Stylized Territorial System on Lock-Out Costs*

1. *Current Lock-Out Costs*

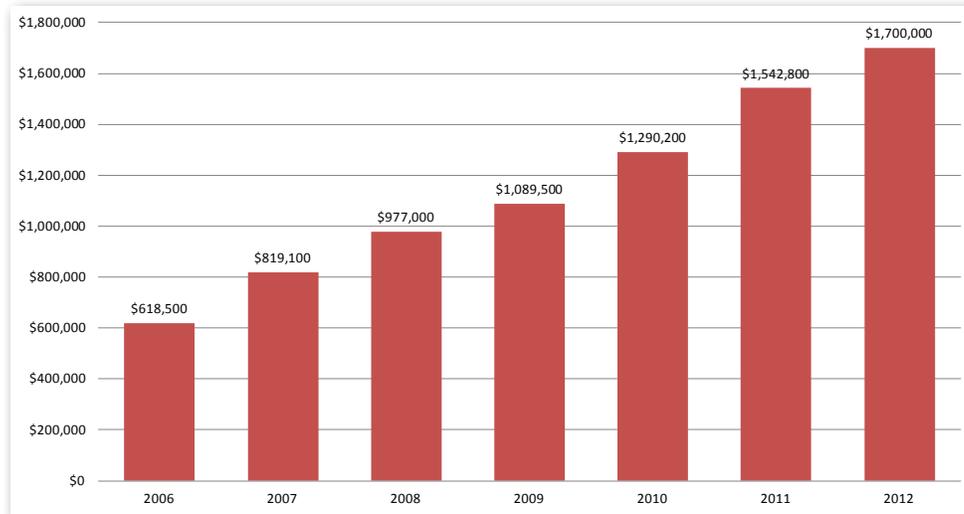
U.S. MNCs would owe U.S. residual taxes on a large portion of their foreign earnings if those earnings were repatriated under the current worldwide tax system. This residual tax is a cost that many U.S. MNCs choose to avoid by deferring

³² See U.S. Congress Joint Committee on Taxation, letter to Representative Lloyd Doggett (April 15, 2011).

³³ In August 2010, President Obama signed into law the Education, Jobs and Medicaid Assistance Act. While the primary purpose of the act was to transfer money to the states for education and Medicare, as part of the revenue offset it added a new section 909 to the tax code: *Suspension of Taxes and Credits until Related Income Taken into Account*. Section 909 provides that if there is a foreign tax credit-splitting event with respect to a foreign income tax paid or accrued by the taxpayer, such tax shall not be taken into account for federal income tax purposes before the taxable year in which the related income is taken into account by the taxpayer. Effectively, section 909 limits the ability of a taxpayer to use an FTC from a source of foreign earnings without repatriating those same earnings.

repatriation of some or most of their active foreign source earnings.³⁴ The residual tax makes it rational to forgo viable investment opportunities in the United States regardless of how attractive foreign investment opportunities may be.³⁵ The deferred foreign earnings are often said to be “locked-out” of the country. The magnitude of such locked-out earnings is large and getting larger. Gravelle (2012) estimates that U.S. MNCs repatriate less than 25 percent of the active income of foreign subsidiaries that can be deferred.³⁶ The current stock of foreign earnings being held abroad was estimated in 2012 to be approximately \$1.7 trillion.³⁷

Figure 1: Cumulative Indefinitely Reinvested Earnings (2006–2012)



Source: U.S. Senate Permanent Subcommittee on Investigations, “Hearing on Offshore Profit Shifting and the U.S. Tax Code,” Exhibit 2b (September 20, 2012). 2012 value is estimated.

While costs associated with the residual U.S. tax burden can make deferral of repatriation economically rational, deferral is costly to U.S. MNCs. The deferral decision for each MNC compares the expected tax savings with the costs of implementing and sustaining the deferral. Deferral is also costly to the U.S. economy because the locked-out foreign earnings are unavailable for domestic uses.³⁸

34 The link between the repatriation tax burden and the incentive of firms to hold foreign earnings abroad has been studied empirically. See, for example, Foley, Hartzell, Titman, and Twite (2007); Blouin and Krull (2009); Dharmapala, Foley, and Forbes (2011); and Blouin, Krull, and Robinson (2009). These researchers find that repatriation tax burdens induce firms to hold more cash abroad. Indeed, Dharmapala, Foley, and Forbes (2011) suggest that firms are often better off holding earnings in a low tax jurisdiction in liquid securities rather than repatriating them, even though earnings from these passive investments are deemed distributed and therefore taxable.

35 For example, suppose the annual yield on cash held overseas is 1.5%. Suppose further that the residual U.S. tax on repatriated earnings is 20% (15% effective foreign tax rate and 35% U.S. corporate tax rate). All else equal, a profit-maximizing firm would choose to repatriate foreign earnings only if the after-tax rate of return in the United States is equal to or greater than that which can be achieved abroad. To achieve an equivalent after-tax return domestically, and assuming a five-year time horizon, the repatriated cash would need to be invested in a project with an expected return of at least 10% to make the firm indifferent between repatriating and holding the earnings abroad. To the extent that U.S. MNCs do not face such opportunities, they have an incentive to hold their foreign earnings abroad. Moreover, even if the MNCs identify such domestic opportunities, with access to capital markets at a sufficiently low cost of credit, they may employ debt financing for domestic operations and continue to hold their foreign earnings abroad.

36 Gravelle, “Moving to a Territorial Income Tax: Options and Challenges” (2012).

37 This estimate is based on MNCs disclosed permanently reinvested earnings (“PRE”). PRE is an accounting designation that allows firms to delay recognition of the deferred tax liability associated with repatriation. Many analysts use PRE as a reasonable proxy for locked-out foreign earnings.

38 For example, Mark Buthman, senior vice president and CFO of Kimberly-Clark Corporation, stated: “[T]he more competitive we are overseas, the more cash we generate overseas—today, the fact is that it is very difficult to bring it back to this country. If we can eliminate that obstacle, there is no question that much of the cash we refer to as ‘trapped’ overseas would return here, to be invested in some way, shape, or form in the United States.” See the Committee on Ways and Means’ “Business Leaders in Support of a Territorial Tax System” for similar statements.

MNC costs associated with deferral generally include a suboptimal corporate capital structure with an inefficient use of deferred earnings and excessive leverage, and the costs associated with establishing and maintaining a worldwide tax strategy to effectuate the deferral. For example, MNCs may defer repatriation by borrowing to fund their domestic activities and using as implicit collateral the cash they hold abroad. This strategy increases debt on corporate balance sheets and may result in higher capital costs.³⁹

Moreover, inefficiencies associated with the lock-out likely distort foreign acquisition strategies for U.S. MNCs. The additional burden of the lock-out cost may make a potential foreign acquisition less valuable to a U.S. MNC relative to its value to a foreign MNC. This lower value could lead a U.S. MNC to bid less and miss out on opportunities to expand abroad. However, the buildup in earnings held abroad may encourage U.S. MNCs to bid more than their foreign competitors for some foreign acquisitions because of the availability of relatively inexpensive capital abroad.⁴⁰ Whether or not U.S. MNCs would acquire more or fewer foreign firms under the stylized territorial system is an empirical question we do not examine in this paper, but we do believe that the pattern and scale of foreign acquisitions would be different.

Lock-out costs have been empirically estimated by some researchers to be around 1 percent of deferred income and have been hypothesized to be in excess of 5 percent of deferred earnings.⁴¹ In general, the firm-level lock-out costs associated with deferral are low enough to lead most U.S. MNCs to hold a large share of their annual foreign earnings abroad rather than to pay the additional domestic tax to repatriate them.

The U.S. economy suffers from the lock-out of foreign earnings. To the extent U.S. MNCs would choose to repatriate foreign earnings in the absence of the repatriation tax, these funds would likely be employed in rational profit-maximizing and efficient activities. Repatriating firms would either fund profitable investment opportunities themselves or would return money to their shareholders. In the latter circumstance, shareholders would increase consumption and/or find new investment opportunities for the repatriated funds. Such activities would in turn lead to job growth and greater economic activity within the United States. The lock-out of active foreign source earnings thus imposes costs to the economy in the form of reduced levels of consumption, investment, and jobs.⁴²

2. Impact of a Switch to the Stylized Territorial System on Lock-Out Cost

A switch to the stylized territorial system would greatly diminish the tax impediment to repatriation. To the extent the costs associated with repatriation (i.e., the residual U.S. corporate tax required) fall below the cost of deferral, an MNC will increase the amount of foreign earnings it chooses to repatriate. We find that the effective tax rate on repatriated foreign earnings under the stylized territorial system—1.75 percent—is low enough relative to the range of estimated costs of deferral to encourage U.S. MNCs to significantly increase repatriation.

The outcome of the one-time reduction in the tax rate on repatriated foreign earnings in 2004 as part of the Homeland Investment Act (“HIA”) supports the expectation of increased incremental repatriation under the stylized territorial system. Under the HIA, U.S. MNCs were allowed, under certain conditions, to repatriate foreign earnings at an effective U.S. residual tax

³⁹ See Grubert and Altshuler (2002, 2012).

⁴⁰ See Grubert and Altshuler (2002, 2012); and Edwards, Kravet, and Wilson, “Permanently Reinvested Earnings and the Profitability of Foreign Cash Acquisitions” (2012).

⁴¹ See Grubert and Altshuler (2012).

⁴² See Tyson et al. (2011) for discussion concerning the impact on the U.S. macroeconomy from repatriated foreign earnings.

rate of 3.65 percent.⁴³ This one-time reduction in the residual U.S. tax rate led many U.S. MNCs to repatriate a significant portion of their then-accumulated foreign earnings held abroad. If the expected costs to retain those earnings abroad had been less than 3.65 percent, it would not have been rational for the U.S. MNCs to repatriate those earnings under the Act. Thus, it is reasonable to infer that most U.S. MNCs will choose repatriation over deferral under the stylized territorial system with a residual tax rate of 1.75 percent.

As illustrated in Figure 1 above, since 2006, U.S. MNCs have designated as permanently reinvested earnings (“PRE”) and retained abroad almost \$180 billion per year. We do not expect that this entire amount will be repatriated on an annual basis under the stylized territorial system. Some portion of foreign earnings is likely needed abroad to finance continuing foreign operations, while withholding and other foreign taxes may make it too costly to repatriate other portions regardless of the reduction in residual U.S. tax associated with a switch to this territorial system. We estimate the incremental annual repatriation following a switch by reference to the model developed in Tyson et al. (2011).

Briefly, that model estimated the amount of PRE held by MNCs that would be repatriated under a one-time reduction in the tax rate on repatriated foreign earnings comparable to the structure of the 2004 HIA. Specifically, the model predicted U.S. MNCs would choose whether to increase repatriation (relative to repatriation amounts at the higher tax rate) based on four distinct firm-specific factors: the magnitude of PRE held abroad; the differential between U.S. and foreign tax rates; the size of the firm; and the revealed preference of the firm to repatriate earnings as reflected by whether it repatriated under the 2004 HIA. If, based on these factors, the MNC would be expected to increase its repatriation at the lower tax rate, we calculated the amount of incremental repatriation, as well as the likely distribution of that repatriation to various domestic uses (e.g., internal investment versus distribution to shareholders), based on observed responses to the 2004 HIA.

We expect a permanent reduction in the tax on repatriated foreign earnings under the stylized territorial system to influence the repatriation decisions of U.S. MNCs in a manner consistent with their response to a one-time reduction in the repatriation tax. Specifically, MNCs that would otherwise indefinitely defer repatriation of foreign earnings due to the high repatriation tax rate in the current worldwide system will instead repatriate a portion of those earnings at the lower repatriation tax rate under the stylized territorial system. The amount they repatriate will depend on the same general considerations that would affect their repatriations under a one-time reduction in the repatriation tax rate, but with some important differences.

The tax reduction under the 2004 HIA and under the one-time reduction we modeled in our prior paper was subject to general limitations that would not be present under the stylized territorial tax system. In particular, the amount of dividends eligible for the deduction under the HIA was limited to the amount of earnings designated as PRE on or before June 30, 2003. In addition, to qualify for the deduction under the HIA, firms were required to include the dividends as part of a written “domestic reinvestment plan” approved by the firms’ senior management and boards of directors.⁴⁴

These limitations suggest that the estimated amount of repatriation, relative to PRE, calculated using a model for a one-time reduction in the repatriation tax may underestimate the amount of repatriation that will occur under a permanent reduction that includes no such limitations. Under the stylized territorial tax system, the amount of foreign earnings available for repatriation at any given time is not limited by the amount firms would choose to designate as PRE, but rather by the amount

43 Kleinbard, Edward D., and Patrick Driessen, “A Revenue Estimate Case Study: The Repatriation Holiday Revisited,” *Tax Notes* (September 22, 2008).

44 This latter restriction did not explicitly apply under the one-time reduction we modeled in our 2011 paper. However, as our 2011 paper employed parameters based on observations from the 2004 HIA, the parameters of our model implicitly accounted for this restriction.

firms would choose to defer. In general, the latter amount exceeds the former as some firms do not or cannot designate all deferred foreign earnings as PRE.⁴⁵

A one-time reduction in the tax on repatriation could also create an incentive for firms to repatriate a larger share of their PRE than they would under a permanent tax reduction in an attempt to capture tax savings not anticipated to exist in the future. The incentive to increase repatriation amounts simply to take advantage of the one-time lower tax will not exist under the stylized territorial system. To the extent that the observed responses to the 2004 HIA, on which we based our 2011 model, incorporated some amount of this “excess” repatriation, the incremental repatriation we calculate may overstate the amount of repatriation that would occur under a permanent tax rate reduction.

We believe that any overstatement of incremental repatriation under the stylized territorial system that may arise from the use of a model developed for a one-time tax reduction because of “excess” repatriation is more than offset by the understatement in incremental repatriation from the use of PRE instead of total deferred foreign earnings, and by the absence of restrictions on the use of repatriated funds. Thus, on net we believe that the model used in our prior paper provides a reasonable basis on which to calculate incremental repatriation under the permanent repatriation tax reduction assumed in the stylized territorial tax system.

We also believe that the likely distribution of repatriated monies between various domestic uses by U.S. MNCs is unaffected by differences between a one-time and a permanent repatriation tax reduction. Specifically, we assume that profit considerations determine how firms will employ additional repatriated funds under the lower tax rate.⁴⁶ To the extent repatriating firms’ have profitable opportunities to use the funds for internal purposes such as research and development or other investments, they would do so. Absent such opportunities, they would likely distribute the repatriated monies to their shareholders, as many firms did under the 2004 HIA. The internal use of repatriated funds by MNCs would expand the U.S. economy directly through their increased investment activities. The repatriated funds returned to shareholders of MNCs would also expand the economy through increased consumption as well as reinvestment activities.

A tax reduction on repatriations effectively reduces the cost to a firm of using its internal capital held abroad to invest in profitable economic activities in the United States. Economic and finance theory predicts that this cost reduction will not increase such investments unless a firm is capital constrained. That is, unless a firm is constrained in its ability to raise capital to finance profitable investments from external capital markets (through equity or debt) or from other internal sources (domestic cash balances), the availability of repatriated foreign subsidiary earnings should have no impact on the firm’s domestic investment activities. Theory also predicts that an efficiently managed firm that is not capital constrained will distribute most of its repatriated foreign subsidiary earnings to its shareholders, through dividends and share repurchases.

As in our prior paper, in this paper we first use our model to identify those U.S. MNCs likely to take advantage of the lower repatriation tax to increase repatriations. We find that about 30 percent of firms in our large sample of U.S. MNCs will likely increase repatriations under the stylized territorial tax system, and that the after-tax incremental repatriations of these firms will amount to about \$112 billion per year. We then rank these firms based on their likely ability to self-finance domestic business activities using a common measure of capital constraints (the Kaplan-Zingales, or “KZ,” index). Based on this

⁴⁵ The designation of foreign earnings as PRE allows firms to defer the recognition of the U.S. tax expense related to foreign earnings. However, not all retained earnings of foreign subsidiaries are designated as PRE. Retained earnings that do not meet the “indefinite reversal criteria” of APB 23 must have deferred U.S. tax provided in the consolidated financial statements.

⁴⁶ While we assume these profitable opportunities are not impacted by whether the tax reduction on repatriation is permanent or temporary, it may in fact be the case that certain opportunities are only profitable under the expectation of some sustained time period of access to relatively cheap foreign earnings. In such a case, we understate the level of increased economic activity resulting from a switch to a territorial tax system, as our analysis is based on behaviors observed from a temporary reduction in taxes.

measure, we estimate that capital-constrained firms will account for about 25 percent (\$28 billion) in annual incremental repatriations, while the other 75 percent (\$84 billion) will be repatriated annually by MNCs that are not capital constrained.⁴⁷

Based on studies of how capital-constrained firms used the funds they repatriated in response to the 2004 HIA, we estimate that at least 39 percent of the after-tax repatriations, or about \$11 billion of the \$28 billion repatriated annually by the capital-constrained firms, will be used for new investment.⁴⁸ Using standard macroeconomic relationships between investment spending, aggregate demand, and employment, we estimate that this increase in investment spending will increase GDP by at least \$15.5 billion per year and will create at least 109,000 new jobs per year.⁴⁹

The \$84 billion repatriated per year by the MNCs that are not capital constrained will likely be distributed to shareholders in the form of dividend payments and share repurchases. Not all of this distributed cash will be available for consumption or direct reinvestment in new productive activity in the U.S. economy. After repatriation taxes, a portion will go to foreign shareholders of U.S. corporations. Additionally, a large part of the amount distributed to U.S. shareholders will go to investment accounts under institutional management or to personal retirement or other tax deferred accounts. We do not expect distributions to institutional or tax-deferred accounts to affect consumption of U.S. goods and services or to lead to direct reinvestment in new productive activity.

We calculate that U.S. households will receive about \$11.4 billion annually that will be available for additional consumption. Based on studies that evaluate the impact of dividends and forced conversions of equity into cash, we estimate that the distributions of repatriated monies to shareholders will result in increased U.S. consumption of about \$4.6 billion per year.

The portion of the monies returned to U.S. shareholders that is not used for consumption will likely also benefit the U.S. economy. This money is likely to be used to reduce household debt, add to household savings, or purchase alternative financial assets. To the extent purchases of alternative financial assets occur, the repatriation will indirectly move capital from surplus cash within the repatriating firms to actively deployed capital by other firms. These new financial investments will either directly finance an increase in real capital investment in the U.S. economy or indirectly encourage such real investment through market signaling. Our analysis of the effects of the additional repatriation flows on spending and economic activity does not include an estimate of this additional investment activity.⁵⁰

In total, we estimate that the dividends repatriated from previously accumulated foreign earnings and returned to U.S. shareholders will increase annual GDP by about \$6.4 billion and will create about 45,000 new jobs per year.

Overall, we conclude that the expected increase in investment spending by some repatriating firms, and the expected increase in consumption spending by shareholders caused by a significant increase in the repatriation of foreign subsidiary earnings under the stylized territorial tax system, will have the following effects on the U.S. economy:

47 Based on this index, we assume that the one-third of firms with the largest KZ score are “capital constrained.” See Tyson et al. (2011) for more detail.

48 Petersen and Faulkender (2012) find that capital-constrained firms used 78% of the funds they repatriated under the 2004 HIA for domestic investment activities.

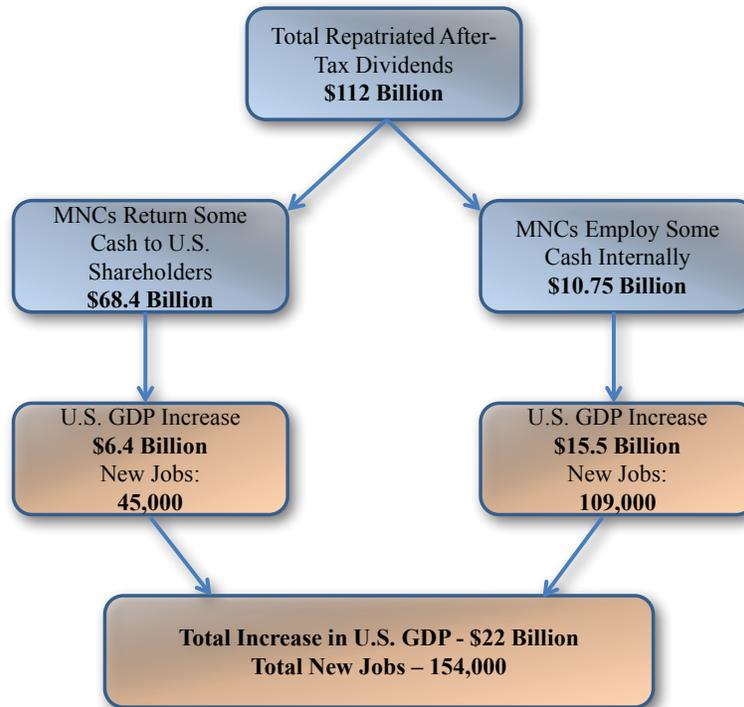
49 See Tyson et al. (2011) for detail on the methodology to segment firms, calculate expected repatriation totals, and track the flow of repatriated monies, and the macroeconomic multipliers used to arrive at these estimates.

50 In addition to the direct effects on household consumption that arise from the return of repatriated funds to individual shareholders, we estimate an additional wealth effect on consumption from a likely increase in the share prices of repatriating firms. We estimate that U.S. shareholder equity wealth will increase by about \$19 billion as a result of repatriation flows under the evaluated transition plan and this increase in wealth will increase consumption by less than \$1 billion. See Tyson et al. (2011) for more detail on the wealth effect calculations.

- An increase of at least \$22 billion in GDP per year
- An increase of at least 154,000 jobs per year

Figure 2 illustrates how the incremental repatriation expected to follow from a switch to the stylized territorial tax system will lead to increased economic activity in the United States.

Figure 2: Effects of Increased Repatriation⁵¹



B. Impact of Switch to the Stylized Territorial System on Income Shifting

Tax-motivated income shifting—moving income currently attributable to the domestic operations of U.S. MNCs to their CFCs in order to benefit from lower taxes abroad—is commonly cited as an unwelcome byproduct of the current U.S. tax system. Income shifting refers to shifting taxable corporate income out of the United States into low-tax foreign locations. This is done by shifting real economic activities to these locations—what we refer to as *job shifting*—and by shifting the profits from intellectual property or other intangible assets, often through transfer pricing mechanisms, to these locations—what we refer to as *IP shifting*.

⁵¹ Some portion of the after-tax dividends repatriated by U.S. MNCs will not be available to generate increased economic activity in the U.S. A portion of repatriated monies that will be distributed to shareholders will go to foreign shareholders. We do not assume these distributions will return to the U.S. economy. Additionally, while we expect firms that face capital constraints to undertake additional real investment following repatriation, we do not expect all of their repatriated funds to go toward this purpose, and we make no assumption as to the use of the residual repatriations of these firms. The difference between total after-tax repatriations and the amount we model as flowing into the U.S. economy comprises the amounts assumed going to foreign shareholders and not invested by capital-constrained firms. See Tyson et al. (2011) for detail on the methodology to segment firms, calculate expected repatriation totals, and track the flow of repatriated monies, and the macroeconomic multipliers used to arrive at these estimates.

Job shifting can be accomplished either by relocating real business activity from the United States to the MNCs' CFCs or by having the CFCs subcontract these activities from third parties; in either instance, the defining characteristic is the cessation of a business activity that employed U.S. workers in favor of achieving comparable output using foreign labor.⁵² It is also important to note that while most *IP shifting* is tax motivated, non-tax factors are the primary determinants of *job shifting*, although tax considerations can play a role.

Opponents of a switch to a territorial tax system argue that it will not reduce but in fact worsen the negative effects of *IP shifting* and *job shifting* on the U.S. economy. In evaluating the likely impact of a switch to the stylized territorial system on tax-based income shifting, we separately identify and evaluate anticipated incremental changes (if any) in *IP shifting* and *job shifting*. Incremental changes in *IP shifting* could be expected to have an impact on U.S. tax collections but, under most circumstances, would not result in U.S. job losses. *Job shifting*, on the other hand, would likely result in both lower tax collections and the loss of U.S. jobs.

Absent anti-base erosion rules specifically designed to discourage tax-motivated income shifting, we find that a switch to the stylized territorial system will likely encourage additional *IP shifting* over time as innovation-intensive firms structure the ownership of future IP so as to locate that IP abroad. We do not, however, anticipate a significant and material increase in *job shifting* from a switch to this territorial system, because the incentives of many firms to transfer real business activity out of the country will not change relative to the current system.

1. *Income Shifting under the Current Worldwide System*

Significant *IP shifting* and *job shifting* have occurred and are expected to continue under the current U.S. worldwide system. Kimberly Clausing (2009) estimates that by 2004, tax-motivated income shifting moved over \$180 billion in corporate income out of the country, while the shifting of real activity lowered U.S.-based profits by \$80 billion.⁵³

a. *IP Shifting under the Current System*

Under the current system, tax-motivated *IP shifting* is economically rational if a U.S. MNC defers repatriation of its active foreign source earnings and thus avoids residual domestic tax payment due on those earnings.⁵⁴ Absent the ability to defer repatriation, an MNC would have little tax-based rationale to shift IP assets out of the United States, because it would still pay the full U.S. tax even if the assets were shifted to a low-tax country. Thus, *IP shifting* is generally limited to IDs who can defer repatriation of the active foreign source earnings attributed to the relocated IP.

52 In some circumstances, these two mechanisms for income shifting may be tied together under our current tax system. As a general matter, the identification and attribution of MNC income among the different countries where an MNC operates fall under the concept of "transfer pricing." In the simplest sense, transfer pricing refers to the price at which one geographically distinct related party sells a product or service to another. In the broader sense, transfer-pricing law regulates the mechanisms by which MNCs can shift income between its geographically distinct related entities. Under the current U.S. international tax system and transfer-pricing law, MNCs may find it difficult to shift income attributable to IP or other intangible assets outside of the United States by transferring the underlying assets to CFCs without also moving other real business activity out of the country.

53 Clausing, Kimberly A., "Multifirm Tax Avoidance and Tax Policy," *National Tax Journal*, Vol. LXII, No. 4 (2009).

54 Note that the gain from income shifting does not require indefinite deferral; the ability to reinvest income shifted abroad and defer repayment can be more profitable than investing that money at home, assuming that U.S. tax rates are higher than those faced abroad. Kevin S. Markle (2011) provides a remark made by John M. Samuels at the Tax Council Policy Institute's 11th Annual Tax Policy and Practice Symposium in February 2010 that under the current tax system "... a company can always repatriate all or any portion of its foreign earnings at any time it chooses, with the only cost of repatriation being the same U.S. tax that it would have had to pay had it not shifted the income outside in the first place... Simply put, it is economically rationale for a company to always shift as much income offshore as possible because it gets the benefit of the time value of money and sometimes the accounting benefit." (Markle, Kevin, "A Comparison of the Tax-Motivated Income Shifting of Multinationals in Territorial and Worldwide Countries" (February 18, 2011)).

IP shifting by IDs is expected to continue under the current system both because their ability to shield other foreign source income with excess FTCs is declining as a result of recent restrictions on cross-crediting and because foreign corporate tax rates are declining relative to the U.S. rate. Lower foreign corporate tax rates are the primary factor motivating *IP shifting*, and these rates relative to the U.S. rate have steadily declined since the mid-1990s, making *IP shifting* a more profitable response of U.S. MNCs. In 1996 the promulgation of the so-called “check-the-box” regulations also made income shifting easier by facilitating the ability of U.S. MNCs to move foreign income to countries with the lowest tax rates.⁵⁵

The ability of U.S. MNCs to accumulate and use excess FTCs to shield foreign source income such as royalties is also decreasing under the current system, adding to the incentive for further *IP shifting*. Fewer excess FTCs are being accumulated as foreign tax rates decrease relative to U.S. tax rates. And recent changes in U.S. tax laws have restricted so-called splitting of FTCs, a means by which an MNC could use FTCs from one source of active foreign earnings (earnings that it does not repatriate) to shield taxation of other foreign source income. As it becomes more difficult to use FTCs to shield foreign source income such as royalty income, the tax-based incentives for *IP shifting* strengthen.

b. Job Shifting under the Current System

Job shifting occurs under the current system because of both tax- and non-tax-based benefits that can be realized by relocating real business activity abroad. Any U.S. firm may find it economically rational to relocate real business activities to foreign locations if the economic benefits exceed the costs. The economic benefits U.S. firms seek by relocating activities abroad generally fall into one of two categories: efficiency based or market based.

Efficiency-based benefits relate to supply chain and cost considerations; specifically economies of scale and scope, as well as lower factor prices. By contrast, market-based benefits relate to access to customers and increased global market share. In either case, U.S. firms incur costs to achieve expected benefits. Depending on the activity and the means by which relocation is achieved, costs may include the cost to build or acquire property, plant, and equipment; shipping costs; subcontracting costs; and additional personnel and management costs.

While IDs that have moved real activity out of the United States may have done so because non-tax benefits or the combination of tax and non-tax benefits exceeded the costs of moving, NIDs likely did so strictly because of the non-tax benefits (because without deferral, NIDs generally cannot achieve significant tax savings from relocation).⁵⁶ Since IDs will be able to continue to defer repatriation of active foreign source earnings as long as the current system applies, they will likely continue to move existing U.S. activities abroad whenever the non-tax benefits or the combination of tax- and non-tax-based benefits make such a decision economically rational. NIDs may also move some existing U.S. activities abroad in the future; but if they do so, their decision would be based largely on non-tax factors.

⁵⁵ These regulations allow a U.S. parent to easily elect whether a CFC is to be treated as a partnership (i.e., a pass-through entity) or a corporation for U.S. federal tax purposes. Check-the-box has enabled U.S. MNCs to move income from a CFC in a high-tax location to a CFC in a low-tax location, thereby lowering tax payments to foreign taxing authorities without triggering a current tax payment to the U.S. Treasury that might otherwise be expected under subpart F anti-deferral regulations. Income can be shifted between foreign affiliates by making royalty or interest payments from one to the other. Prior to the check-the-box-regulations, such transactions between separate corporations (CFCs) were treated as taxable events. If, on the other hand, such transactions occur within a corporation, they are transparent to the Treasury; no taxable event has taken place. The check-the-box regulations allow a company to designate a subsidiary as a branch. Thus, the transaction between the CFC in a high-tax location and its “branch” has no U.S. tax consequences for the income unless it is repatriated. Further, with respect to the foreign taxing authorities, the transfer is a deductible expense in one jurisdiction and income in the other, thereby lowering the corporation’s foreign tax liabilities (assuming income is shifted from a higher- to a lower-tax jurisdiction). The Treasury estimates annual revenue losses of \$10 billion from check-the-box regulations (Gerth, Jeff, Megan Murphy, and Vanessa Houlder, “Corporations Couldn’t Wait to ‘Check the Box’ on Huge Tax Break,” *ProPublica* (September 26, 2011)).

⁵⁶ Devereux and Freeman (1995), in fact, find that taxes are not a significant factor in whether to invest at home or abroad (Devereux, Michael P., and Harold Freeman, “The Impact of Tax on Foreign Direct Investment: Empirical Evidence and Implications for Tax Integration Schemes,” *International Tax and Public Finance*, Vol. 2 (1995)). They do, however, find that tax-based incentives play a much larger role in the secondary decision of exactly where to locate this activity abroad once the initial decision to go abroad has been made, a finding constant with Markle (2011).

2. *Impact of a Switch to the Stylized Territorial System on Income Shifting*

Given that income shifting occurs and is encouraged under the current system, the analysis of a switch to the stylized territorial system should focus on its impact on income that has not or will not shift in the future under the current system.

a. *Change in IP Shifting under Territorial*

NIDs face few tax-based incentives to shift their IP abroad under the current system. Under the stylized territorial system, the tax-based incentives facing these firms would change; whereas shifting IP income under the current system would yield no tax benefits, IP shifting under this territorial tax system could be profitable for these firms.

Switching to the stylized territorial system will have little effect on the incentives of IDs to shift IP income on which they currently pay U.S. taxes. The fact that they have not shifted the underlying IP assets under the current system indicates that there are no tax-based benefits from doing so. IDs also currently face no incentive to shift IP income that they can shield from U.S. taxes through the use of excess FTCs. However, because the stylized territorial system will eliminate their ability to use excess FTCs to shield this type of income, a switch may create an incentive for them to assign the IP assets that generate currently untaxed income to a CFC, thereby transforming non-exempt foreign source income to exempt dividend income.

The expectation that a switch to the stylized territorial system will result in additional *IP shifting* by some but not all U.S. MNCs is supported empirically by the work of Kevin Markle (2011).⁵⁷ Markle tests whether MNCs domiciled in territorial countries shift more income for tax purposes than do MNCs domiciled in countries with worldwide tax systems. Markle's findings suggest that a switch from a worldwide system to a territorial one "will be accompanied by an increase in income shifting that involves the parent country, but no change in shifting among foreign affiliates, and no increase in either dimension by firms that have consistently reinvested foreign earnings abroad." That is, additional *IP shifting* resulting from a switch to the stylized territorial system would most likely come from NIDs, not IDs.

But it is difficult to estimate the amount of incremental *IP shifting* that could be expected to occur under this system. As discussed below, a likely upper bound is the total amount of royalties currently received by U.S. parents from their CFCs—currently estimated to be approximately \$90 billion per year. However, this upper bound is not likely to be reached because at least one-third of this royalty income is currently subject to U.S. tax and would have already been shifted abroad under the current system if a tax benefit could be achieved.⁵⁸ In addition, the tax savings from shifting abroad existing income generating IP currently held in the United States are likely to be small because such shifts will require taxable compensating payments to U.S. parents.

b. *Change in Job Shifting under Territorial*

A U.S. MNC that has not relocated real activity out of the United States under the current system has likely determined that the benefits associated with such relocation do not justify the costs. A switch to the stylized territorial system would lead to *job shifting*, then, only if it increased the benefits to a firm relative to its costs. It is not expected that the switch would have any material effect on the non-tax benefits associated with relocating U.S. activity abroad. Thus, the switch could only increase the tax-based benefits of such relocation. Since the tax-based benefits IDs can achieve under this territorial system

⁵⁷ Markle (2011).

⁵⁸ Grubert and Altshuler, "Corporate Taxes in the World Economy: Reforming the Taxation of Cross-Border Income" (2006).

are essentially the same as they currently achieve through deferral, it is not likely that many IDs would increase *job shifting* activity solely as a result of the switch.

The situation would be different for NIDs unable to take full advantage of deferral to avoid paying additional U.S. tax on repatriations of active foreign earnings under the current system. Under the stylized territorial system, 95 percent of these repatriations would be exempt from U.S. tax. As a result, the potential tax-based benefits of *job shifting* for these firms would increase relative to the current system. But we do not anticipate that this increase would have a significant effect on their decisions about moving real economic activities from the United States to foreign locations, because such decisions depend primarily on non-tax considerations like the availability of low-cost inputs and access to foreign markets. NIDs would have already shifted production to low-tax foreign locations under the current tax system if such locations with low-cost inputs were a viable alternative to producing in the United States.

Under some circumstances in the current system, a U.S. MNC may choose to cease U.S. manufacturing activities in favor of foreign production (either through a foreign subsidiary or third-party contract manufacturing) in concert with the movement of IP assets out of the United States in order to benefit from lower foreign tax rates.⁵⁹ Some IDs may currently take advantage of such opportunities, but NIDs likely do not because they cannot indefinitely defer repatriation of the low-tax foreign income. Under the stylized territorial system, NIDs may find such a strategy profitable, and thus may increase *job shifting*. We do not, however, expect many NIDs to be able to do so, because this strategy requires the NIDs to have an active and forward-looking IP asset development program that is the basis of its future profitability.⁶⁰ Firms that have such IP asset development programs, however, are more likely to be IDs than NIDs.

Critics of a territorial system also express concern that the stronger incentives for *IP shifting* in such a system would encourage MNCs to shift R&D activities to low-tax foreign locations. But evidence indicates that MNCs base their decisions on where to locate such activities primarily on non-tax considerations like the availability of skilled labor, linkages to research universities, and intellectual property protection, as well as on targeted policies to support research like R&D tax credits. MNCs can take advantage of the enhanced tax benefits of income shifting under a territorial system by increasing their *IP shifting* without changing the location of their R&D activity.

In a recent paper, Mutti and Grubert (2009) investigate how check-the-box regulations and cost-sharing arrangements have affected the behavior of MNCs concerning the movement of intangible assets abroad. They find that while there has been substantial shifting of IP abroad as a result of these tax-planning options, the share of R&D activities by MNCs in low-tax countries has not grown over time, because such countries lack the necessary skilled labor, infrastructure, and university linkages to support these activities. Their results suggest that an incremental increase in tax-motivated shifting of R&D activities arising from a switch to the stylized territorial system would not be a major issue.

Preliminary empirical research with respect to the United Kingdom and Japan's relatively recent switches to territorial tax systems tends to support our expectation that fears of significant *job shifting* are overstated. In the United Kingdom, the Tax Foundation concluded that "it does not appear that the infant territorial system in the UK has created problems for British

⁵⁹ Circumstances under the current tax system would enable U.S. MNCs to benefit from lower tax on their profits when *both* IP assets and associated manufacturing leave the United States, but the benefits of the lower tax are not available if only the IP or only the manufacturing is shifted abroad.

⁶⁰ If an NID generated substantial profit from current IP assets but did not have a forward-looking IP asset-development program, the NID would not likely benefit from shifting its IP abroad, because such current IP is easier to value and the NID would need to pay U.S. tax on the value transferred abroad, obviating the tax savings.

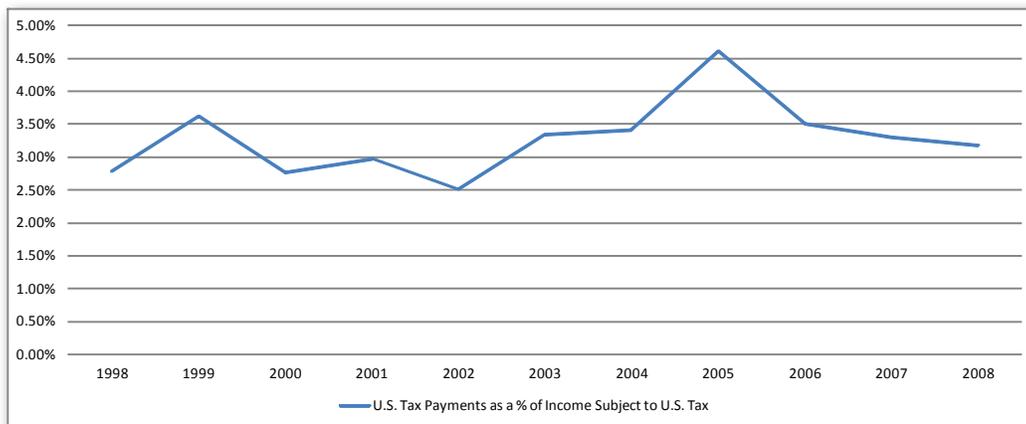
workers or government coffers.”⁶¹ For Japan, the Tax Foundation found that “unemployment rate is down, wages are up, and corporate tax revenues have remained stable.”⁶²

C. Impact of Switch to the Stylized Territorial System on U.S. Tax Revenues

1. Tax Revenues under the Current System

Very little tax revenue is collected from the foreign activities of U.S. MNCs under the current system. In 2008, the most current year for which data are available, U.S. tax revenue on foreign source income amounted to only \$22.1 billion. This represents just 3.2 percent of the total reported corporate income subject to U.S. tax, an amount that has remained relatively constant in recent years (Figure 3).⁶³ This low level of tax collection is not surprising given the incentives under the current system to defer repatriation of active foreign source earnings and to shift income abroad. Moreover, cross-crediting has enabled U.S. MNCs to shield other foreign source income such as royalties and export income that would be subject to U.S. tax but for the cross-crediting.

Figure 3: U.S. Residual Tax on Foreign Source Income 1998–2008



Source: Internal Revenue Service, *SOI Tax Stats - Corporate Foreign Tax Credit Table 1*

As has been discussed, however, recent changes in U.S. tax regulations and the growing gap between U.S. and foreign corporate tax rates have likely reduced the amount of FTCs relative to repatriated income. As FTCs decline, the share of foreign source income that U.S. MNCs can shield with excess FTCs declines as well. Specifically, U.S. MNCs are likely less able to shield royalty income earned on U.S.-based IP assets through the use of excess FTCs. As U.S. MNCs shield less royalty income from tax, the tax collections on MNC foreign source income should increase somewhat under the current system. Any potential increase in tax collections may not be long lasting, however, because MNCs will likely change their behavior and shift more of the IP assets that generate the now-taxable income abroad and/or find other means within the current tax code to recharacterize this income to avoid taxation.

It is important to consider and understand the tax-based incentives that currently influence U.S. MNC behavior vis-à-vis IP location decisions, and how these incentives will likely evolve over time under the current system in order to evaluate incremental changes in tax collections from a switch to the stylized territorial system. If we overlook the fact that much of

⁶¹ Tax Foundation, “The United Kingdom’s Move to Territorial Taxation” (November 14, 2012).

⁶² Morrison, Richard, “Japan Disproves Fears of Territorial Taxation,” *Tax Foundation* (November 13, 2012).

⁶³ Internal Revenue Service, *SOI Tax Stats - Corporate Foreign Tax Credit*, Table 1 (last updated December 6, 2012).

the income shifting expected to occur under this territorial system would also likely occur under the current system, we will overestimate the impact of the switch on *IP shifting* and on U.S. corporate tax revenues.

2. Tax Revenues under Territorial

An exact estimate of changes in U.S. tax collections following a shift to a territorial tax system depends on many factors and assumptions, including the specific set of rules and regulations imposed under the new system, and the behavioral responses of firms to these new rules and regulations. Differences in assumptions can and do lead to very large differences in estimates. For example, the U.S. Treasury has estimated that a territorial system without expense allocation rules could cost \$130 billion over the 10-year budget, while the JCT has estimated that a territorial system with expense allocation rules would raise \$76 billion over the 10-year budget window.

In this paper, we do not attempt to perform a detailed analysis of the exact revenue effect following a shift to a territorial system. Instead, we take a simplified and assumption-driven approach designed to provide directional guidance and a measure of the likely magnitude of tax revenue changes.

a. Initial Impact

Given the ability of U.S. MNCs—particularly IDs—to generate and use FTCs not only as a credit against their dividend income but also to shield other forms of foreign source income (e.g., royalty and export income), it is unlikely that IDs pay any tax on CFC dividends. Since IDs can fund domestic operations without most of their foreign earnings, they will repatriate only those earnings that they can shield from residual tax by FTCs. For purposes of estimating tax changes, we assume that IDs can shield 100 percent of their CFC dividends.⁶⁴ NIDs, however, do not have the same freedom as IDs to pick and choose which sources of foreign source earnings to repatriate. Thus, NIDs likely pay residual U.S. taxes on CFC dividends. We assume the residual tax rate paid by NIDs on CFC dividends is 9.7 percent—the difference between the U.S. and average OECD statutory corporate tax rates.⁶⁵

In 2008, the most recent year for which corporate tax data is available, IRS data indicates that CFC dividends to U.S. parents were approximately \$91.7 billion. Assuming that about 30 percent of U.S. MNCs are NIDs and about 70 percent are IDs, and that only NIDs pay residual U.S. tax, NIDs paid tax of about \$2.54 billion on their repatriated active foreign source earnings.⁶⁶ Based on these 2008 statistics, the IRS would collect about \$1.6 billion in taxes on these same dividends under the stylized territorial system (1.75 percent of \$91.7 billion), representing a loss to the U.S. Treasury from CFC dividends of just under \$1 billion as compared to the current system.⁶⁷

Under the stylized territorial system, this small tax loss will be offset by additional tax collections. First, tax will be collected on other types of foreign source income that will no longer be shielded from U.S. taxation with excess FTCs—mainly

64 Given the existence of lock-out costs, it is actually economically rational for IDs to repatriate income as long as the effective residual U.S. tax rate is less than those lock-out costs. This assumption is made for expository ease and does not materially impact our conclusions.

65 OECD, “Tax policy analysis—OECD Tax Database.”

66 Based on 2008 dividends, our analysis implies a residual U.S. tax rate of 2.76% (\$2.54 billion paid on \$91.7 billion in dividends). This rate likely exceeds the actual rate paid in 2008. For example, Gravelle (2012) estimates that for 2007 the residual tax rate on active dividends was about 0.5%. However, this is based on parameters from 2000. Since that time, changes in splitting rules, a greater use of check-the-box regulations, and a declining average foreign tax rate have diminished the ability to generate foreign tax credits. Thus, we believe our estimate of 2.76% is reasonable.

67 Though U.S. MNCs will, in total, pay less tax on current repatriations, not all MNCs will benefit. NIDs that previously paid a 9.7% residual U.S. tax will, under the territorial tax system, pay only 1.75%, implying a savings of about \$2.08 billion. IDs, on the other hand, would pay 1.75% on the \$65.5 billion previously untaxed by the IRS, resulting in an increased tax bill of \$1.15 billion for these firms.

royalty income. In 2008, U.S. MNCs received about \$90 billion in net rents, royalties, and license fees.⁶⁸ Assuming that half of this income is currently shielded from U.S. taxation, the switch in tax systems will lead to an increase in tax revenue of about \$16 billion (assuming a 35 percent tax rate).

Additional tax revenue will be collected on increased CFC dividends as U.S. MNCs repatriate additional active foreign source earnings under the stylized territorial system. As discussed above, between 2006 and 2012, U.S. MNCs increased their stock of PRE held abroad by approximately \$180 billion per year. We assume this figure provides a reasonable proxy for the annual amount of active foreign earnings that qualify for deferral that are actually deferred.⁶⁹ Based on Tyson et al. (2011), we estimate that under this territorial system an additional \$114 billion will be repatriated annually rather than deferred, leading to \$2 billion in additional tax revenue.⁷⁰ This is a pure gain to the U.S. Treasury, as these firms would not be expected to repatriate these monies in the foreseeable future under the current system. Thus, we estimate that the total initial increase in tax revenues following a switch to the stylized territorial system will be about \$17 billion per year.⁷¹

b. Impact over Time

Over time (i.e., after these initial changes in income shifting behavior have occurred), a switch to the stylized territorial system is less likely to result in increased tax revenues, and absent special base erosion rules, the long-run effect on revenues may in fact turn out to be negative.⁷² NIDs that have minimal tax-based incentives to shift income abroad under the current system will, under this territorial system, face tax-based incentives to substitute lower-taxed dividends for higher-taxed royalty payments. If such *IP shifting* by NIDs occurs, a current source of tax revenue would disappear. Similarly, IDs that currently use excess FTCs to shield royalty income will initially face increased taxes after the switch to the stylized territorial system and will have incentive to shift the IP that generates this now-unshielded royalty income abroad. Thus, over time, the initial tax gains from increased taxes on royalty income will likely decrease to some extent.

At the extreme, all currently received royalty income could shift abroad under the stylized territorial system (i.e., about \$90 billion in 2008). Assuming every U.S. MNC would shift all IP out of the United States to avoid taxation of royalties, and that 50 percent of foreign source royalty income is currently shielded, the eventual annual tax loss under this territorial system relative to current collections could be as much as about \$16 billion.⁷³

68 Internal Revenue Service, *SOI Tax Stats - Corporate Foreign Tax Credit*, Table 1.

69 Use of PRE as a proxy for deferral may underestimate the amount of active foreign source income actually deferred each year. According to Gravelle (2012), less than 25% of the active foreign earnings that can be deferred are actually repatriated. Based on IRS data, in 2008 the U.S. parents of CFCs received approximately \$91.7 billion in dividend payments. Gravelle's estimate implies that about \$275 billion in foreign source earnings were deferred in 2008. This amount is far in excess of the approximate \$160 billion increase in PRE for that year. To the extent the use of PRE systematically understates deferral, the tax revenue gains, as well as the gains in jobs and GDP previously discussed, will likewise be understated.

70 See Tyson et al. (2011) for details and explanations concerning this estimate. Our estimate acknowledges and accounts for the fact that some MNCs retain foreign earnings abroad for rational business purposes. Additionally, it accounts for the fact that even a 1.75% repatriation tax may exceed the lock-out cost associated with deferral for some MNCs.

71 This finding is not inconsistent with that of Grubert (2001). In that analysis, Grubert found static tax gains from a switch to a territorial system without changes to the deductibility of indirect expenses would be approximately \$1.7 billion. In that analysis, Grubert assumed both a 100% dividend exemption and 100% exemption for branch income. Grubert's static gains would have been higher had his analysis been based on the same structure we evaluate.

72 The time frame over which all tax-motivated income will take place is difficult to estimate. As discussed above, most of the income shifting is expected to come from *IP shifting*, and this shifting is based less on current IP assets and more on innovations to come in the future. Estimation of the time frame over which such innovation will occur, and the magnitude of such innovation across the economy, is beyond the scope of this paper.

73 These estimates assume that the 2008 figure of \$90 billion is a reasonable proxy for royalty income in the near future under the current system. We believe this to be the case. On the one hand, the changes in the U.S. economy from manufacturing- to service-based likely imply that more and more U.S. companies will generate income from IP-related assets. This expected change would imply that royalty income could be expected to increase in the future. On the other hand, as discussed above, changes occurring within the current system imply fewer excess tax credits to shield royalty income. As this income becomes taxable, U.S. MNCs will likely find ways to reduce these royalty flows under the current system. It is beyond the scope of this paper to determine which of these two effects would dominate under the current system, but we feel the assumption that they will offset one another is reasonable for purposes of our analysis.

We do not, however, expect that a switch to the stylized territorial system will lead the full \$90 billion of royalty income to shift abroad. Much of this royalty income is currently subject to U.S. tax, and it is likely that IDs receive a large portion of this income. Since IDs can currently defer repatriation and avoid U.S. tax, they likely would have already substituted taxed royalties with untaxed foreign earnings if they had a means to do so. Thus, it may be that a significant portion of current royalties would not be easily substituted with lower-taxed dividends under this territorial system.

Any estimate of tax changes from *IP shifting* over time should also account for compensating and/or cost-share payments that would need to be paid from CFCs to U.S. parents as a result of re-domiciling IP. Such payments will trigger U.S. tax liabilities, offsetting to some degree the loss in tax collections associated with *IP shifting*. The need to make compensating payments also makes it unlikely that purely domestic-based firms will engage in much *IP shifting* (i.e., become MNCs) following a tax regime switch. Not only would these firms face the expenses required to create the foreign subsidiary, but they would also have to make the taxable compensating buy-in payments necessary to shift the IP abroad. Based on currently used and valuable IP, these compensating payments would likely negate a large portion of the tax savings. When the expenses necessary to set up the foreign subsidiary are factored into the equation, net savings from *IP shifting* are not likely for many purely domestic firms.

In summation, while we expect that a switch to the stylized territorial system would encourage more IP to be domiciled abroad in the future than under the current system, the calculation of expected tax losses from any incremental *IP shifting* requires assumptions about a number of important factors for which little data are available. Accordingly, such a calculation would be speculative and is beyond the scope of this paper. However, based on current trends, it is far from clear that the potential negative effects on U.S. corporate tax revenues that may occur over time will dominate the more certain initial gains on a present value basis.

D. Impact of Switch to the Stylized Territorial System on U.S. MNC Competitiveness

1. Current Tax-Based Competitiveness

Proponents of a switch to a territorial system maintain that under the current worldwide system, the United States “overtaxes” the active foreign source earnings of U.S. MNCs relative to how other OECD countries tax the same type of income of their MNCs. It is argued that this overtaxing puts U.S. MNCs at a competitive disadvantage in many foreign markets relative to non-U.S. MNCs operating in those same markets.⁷⁴

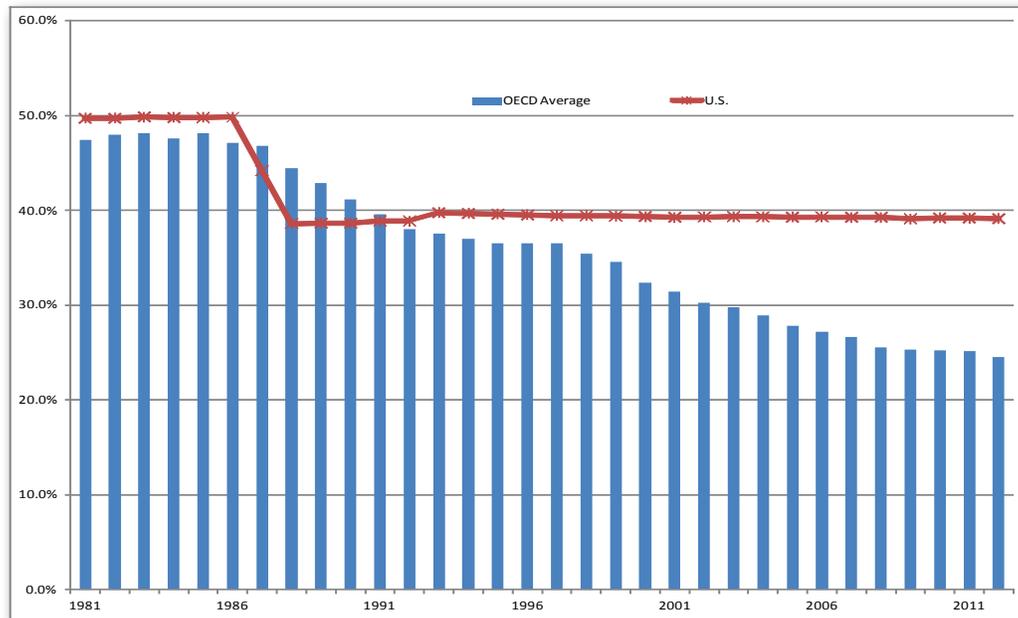
The large and increasing gap between U.S. and foreign corporate tax rates heightens concerns about the effects of the U.S. corporate tax system on the competitiveness of U.S. multinationals and on the competitiveness of the U.S. as a location for their real economic activities. Currently, the U.S. statutory tax rate of 35 percent is among the highest in the world, and this gap has steadily grown (Figure 4).⁷⁵ Since foreign MNCs taxed under a territorial tax system pay only the rate in the market where profit is earned, the rate gap between the United States and most foreign markets implies that U.S. MNCs would pay significantly more in tax on foreign sales than their foreign competitors if U.S. MNCs were to repatriate their active foreign

⁷⁴ Conceptually, if a firm can achieve a higher margin than another as a result of some cost efficiency—all else equal—that firm will have a competitive advantage. Among other things, the lower-cost competitor can set a lower price than the higher-cost competitor, thereby achieving greater market share. If we assume for expository ease that U.S. MNCs and their foreign competitors (who currently operate under territorial) are otherwise identical, then the current U.S. tax structure will make the U.S. MNCs more (less) competitive relative to their foreign competitors to the extent that the U.S. tax structure imposes lower (higher) costs (direct tax costs and/or indirect costs associated with the tax structure) on the U.S. MNCs’ pre-tax earnings.

⁷⁵ In 2011, the United States had a tax rate 11.7% greater than the average tax rate for 64 countries studied in the Deloitte International Tax Source (DITS) “Rates Matrix” (<http://www.dits.deloitte.com/DomesticRates/domesticRatesMatrix.aspx>)

source earnings and pay the residual U.S. tax. All else equal, U.S. MNCs that pay more tax and earn lower after-tax profits on comparable foreign sales than their foreign competitors operate at a competitive disadvantage.⁷⁶

Figure 4: Combined Corporate Income Tax Rate⁷⁷ – OECD versus United States



Source: OECD iLibrary (accessed at: <http://www.oecd-ilibrary.org>)

The argument that U.S. MNCs currently operate at a competitive tax-based disadvantage, however, overlooks the fact that the current system allows many of them to operate as if they were in a territorial system. To the extent a U.S. MNC chooses to defer the repatriation of its active foreign source earnings, it can avoid paying residual U.S. taxes on those earnings. Thus, deferral allows U.S. MNCs to blunt the potential tax-based competitive disadvantage relative to foreign MNCs.⁷⁸

As described above, however, deferral does impose lock-out costs on U.S. MNCs. Thus, even MNCs that defer repatriation face some additional costs not incurred by MNCs domiciled in countries with territorial tax systems. Moreover, not all U.S. MNCs can defer repatriation. Specifically, NIDs do not indefinitely defer repatriation and pay residual U.S. taxes on repatriated income. These residual taxes impose unavoidable costs on NIDs that are not borne by most of their foreign competitors. For these reasons, a switch to the stylized territorial system will improve the tax-based competitiveness of some U.S. MNCs.

2. Impact of a Shift to the Stylized Territorial System on MNC Competitiveness

A switch to the stylized territorial system would replace the current residual U.S. tax paid on dividends received by the U.S. parent with a 1.75-percent tax applied to all repatriated active foreign source earnings that qualify for the 95-percent DRD.

⁷⁶ See, for example, Hufbauer, G., and M. Veiuro, “US Tax Discrimination Against Large Corporations Should be Discarded,” Policy Brief, Peterson Institute for International Economics, Number PB11-16 (2011): “[t]he United States remains the major exception [to a territorial tax system], to its disadvantage as a global competitor”; and Toder, Eric, “International Competitiveness: Who Competes Against Whom and For What?” (2012): “... raising the tax burden that U.S. resident corporations pay relative to foreign based corporations on economic activity within the same countries could reduce the worldwide share of economic output accounted for by U.S. resident corporations.”

⁷⁷ The table reflects the combined central and sub-central (statutory) corporate income tax rate given by the adjusted central government rate plus the sub-central rate.

⁷⁸ Assuming a U.S. MNC can infinitely defer the repatriation of its active foreign income, the tax burden on this income derives solely from those taxes imposed in the tax jurisdiction where the activity takes place. This same tax burden is faced by foreign competitors operating in the same jurisdiction (assuming that the firm’s parent is domiciled in a country with territorial, a reasonable assumption to make given the fact that 27 of the 34 OECD member countries, including all major industrialized countries, currently employ some form of territoriality) (Dittmer, Philip, “A Global Perspective on Territorial Taxation,” *Tax Foundation* (August 10, 2012)).

Additionally, this system would eliminate FTCs on all active foreign source earnings. These two changes in the tax system will lead some U.S. MNCs to experience a reduction in U.S. taxes; others may experience an increase in taxes, at least initially. Specifically, under the stylized territorial system, NIDs will pay less in taxes because they repatriate their active foreign source earnings, and these repatriations will be taxed less. IDs, however, will likely experience an increase in taxation, at least initially. IDs currently can avoid paying tax on the foreign earnings they currently repatriate by using the tax shield of FTCs. This tax shield will disappear under the stylized territorial system, and thus the tax paid by IDs on current repatriations will increase. Additionally, we expect that the reduction in the repatriation tax will encourage IDs to repatriate a greater amount per year than they currently do, and they will also pay the 1.75 percent tax on these incremental repatriations.

Changes in the tax burden faced by U.S. MNCs from a switch to the stylized territorial system, however, may not fully capture changes to their after-tax profitability and corresponding competitiveness. Under the current system, deferral imposes lock-out costs. In the stylized territorial system, IDs that choose to repatriate active foreign source earnings that would be deferred in the current system will experience a reduction in lock-out costs. Thus, IDs that repatriate incremental earnings under this territorial system will experience an increase in profitability from such repatriation (otherwise, it would not be economically rational to increase repatriations), and, for the IDs that will not experience significant increased taxes on royalty income, the overall effect will increase after-tax profitability.

The IDs that will experience an initial net decrease in after-tax profitability under the stylized territorial system because of significantly higher taxes on now-unshielded foreign royalty income may substitute that income with lower-taxed foreign dividends and thereby minimize or eliminate this decrease in profitability. Thus, while we cannot state conclusively that a switch to the stylized territorial system will improve the competitive position of all IDs, some IDs will certainly experience an immediate improvement, while others will experience an improvement over time.

NIDs, for their part, will unambiguously experience an improvement in competitiveness under this territorial system because, as noted above, they will face reduced taxes on repatriated earnings.⁷⁹ This increase in competitiveness will benefit both the firms themselves and the broader economy. Following a switch, NIDs will be more profitable due to lower taxes on foreign earnings. NIDs will likely use these additional profits to increase investment, both domestically and internationally. Increased domestic investment will directly stimulate the U.S. economy. Increased foreign investment may also indirectly stimulate the U.S. economy, because research indicates many complementarities between FDI and domestic activities.

The competitiveness of some IDs may improve immediately as a result of a switch to this territorial system, while most IDs will experience an improvement over time as they shift more IP abroad.

E. Impact of Switch to the Stylized Territorial System on Previously Accumulated Foreign Earnings

As part of their transition to territorial tax systems, OECD countries, with the exception of Canada, did not impose repatriation taxes on the previously accumulated foreign earnings of their MNCs. Given the large stock of previously accumulated foreign earnings currently held abroad by U.S. MNCs, a switch to a territorial system in the United States will likely include a transition plan for the taxation of these earnings. The analysis in this paper assumes a transition plan similar to that

⁷⁹ These conclusions are not dissimilar to those of Toder (2012) with one important caveat. In his study, Toder asks how cuts in the residual U.S. tax on foreign source income, for example through a switch to a territorial tax system, would impact the competitiveness of U.S. resident corporations. He concludes that the corporations would experience a decrease in their tax burden relative to their foreign competitors, and he suggests that this decrease would be associated with an increase in worldwide market share for these firms. It would appear, however, that Toder makes little or no allowance for the fact that under the current U.S. tax system, many of the largest MNCs indefinitely defer repatriation and thus face tax rates no different than what they would face under territorial. His conclusion, therefore, is most relevant only for firms we have categorized as NIDs—the minority of U.S. MNCs. Toder also concluded that under territorial, U.S. MNCs would shift tangible assets abroad. Here too we disagree. For reasons already articulated, firms that have not currently chosen to shift real activity abroad would not likely experience large enough tax savings to make a shift economically feasible under territorial.

proposed by Committee on Ways and Means Chairman Camp as part of his overall territorial plan. The transition plan we evaluate assumes that 15 percent of previously accumulated foreign earnings (not previously subject to U.S. tax) would be included in the taxable income (whether or not repatriated) of U.S. MNCs, and a credit would be allowed for 15 percent of foreign income taxes paid with respect to this income. Dividends repatriated out of accumulated foreign earnings would then be subject to the same 1.75 percent repatriation tax as any other repatriated active foreign earnings in the stylized territorial system.

To evaluate the economic and revenue effects of this transition plan, we proceed in a manner identical to that described above in section IV.2. We first estimate the amount of additional repatriations that would result from the stock of previously accumulated foreign earnings. We then determine how these incremental repatriations would be used. As in our earlier discussion of the impact of increased annual repatriations as a result of the reduction in the tax on repatriation under the stylized territorial tax system, we base our analysis on our prior work examining the likely impact of a one-time reduction in the tax on repatriated foreign earnings.

Using data from a large group of publicly traded U.S. MNCs, we estimate that the stock of previously accumulated foreign earnings was approximately \$1.7 at the end of 2012.⁸⁰ We calculate that in response to the reduced tax rate on the repatriation of these earnings in the transition plan, firms would repatriate about \$1 trillion of this amount in the form of dividend payments from their CFCs to their parent companies, money that would otherwise be deferred. This amount would then be available for domestic use.⁸¹

Under the evaluated transition plan, U.S. MNCs would directly pay approximately \$80 billion in U.S. corporate taxes on previously accumulated foreign earnings. Of this amount, about \$62 billion would come from the transition tax (5.25 percent less FTCs allowed on the total stock of approximately \$1.7 trillion), and about \$18 billion would come from tax on repatriated dividends from this stock of earnings (1.75 percent tax on the \$1 trillion of increased repatriations under the transition plan).

Based on our estimate that capital-constrained firms will account for 25 percent or about \$253 billion of the increased repatriation and our estimate that these firms will use at least 39 percent of these monies for new investment, we calculate that the transition plan will result in at least \$99 billion of new U.S. corporate investment spending. Using standard macroeconomic relationships between investment spending, aggregate demand, and employment, we estimate that this increase in investment spending will increase GDP by at least \$142 billion and will create at least 1 million new jobs.⁸²

Of the \$1 trillion that we expect to be repatriated under the transition plan, about \$774 billion will likely be distributed to shareholders in the form of dividend payments and share repurchases. About \$104 billion of that amount will be available

⁸⁰ This calculated PRE for our sample likely understates the total PRE held abroad. For example, based on a sample of the Russell 3000, a recent report from Audit Analytics finds that \$1.9 trillion is currently held abroad by U.S. corporations.

⁸¹ In our analysis, we use PRE as a proxy for deferred undistributed foreign earnings that would be subject to potential repatriation under the transition plan. While some amount of PRE is held in productive assets that may not be amenable to return to the United States under the transition plan, PRE does tend to underestimate the amount of active foreign source income actually deferred each year. Some analysts have suggested that a more appropriate measure of foreign earnings likely to be repatriated under a transition is the amount of cash and cash equivalents held abroad by U.S. MNCs. Current estimates of this metric are just under \$1 trillion, an amount that is consistent with our finding based on PRE that U.S. MNCs would repatriate just over \$1 trillion as a result of the evaluated transition plan. Additionally, we note that Chairman Camp's transition plan is associated with his overall corporate tax reform proposal, and that this overall proposal includes a new lower U.S. corporate tax rate of 25%. If the overall tax rate were 25%, the repatriation tax under the transition plan would be 1.25%, instead of the 1.75% we evaluate. The difference in the repatriation tax rate would have a very small effect on the amount of additional repatriation of previously accumulated foreign earnings; it would increase the amount repatriated by less than \$5 billion.

⁸² See section IV.2., "Impact of a Switch to the Stylized Territorial System on Lock-Out Cost" for discussion.

for additional domestic consumption.⁸³ Based on studies that evaluate the impact of dividends and forced conversions of equity into cash, we estimate that these distributions of repatriated monies will result in increased U.S. consumption of about \$42 billion.⁸⁴

In addition to the direct effects on household consumption that arise from the return of repatriated funds to individual shareholders, we estimate an additional wealth effect on consumption from a likely increase in the share prices of repatriating firms.⁸⁵ We estimate that U.S. shareholder equity wealth will increase by about \$177 billion as a result of repatriation flows under the evaluated transition plan and that this increase in wealth will increase consumption by an additional \$5 billion.

In total, we estimate that the dividends repatriated from previously accumulated foreign earnings and returned to U.S. shareholders will lead to total increased consumption of about \$47 billion and that this increased consumption will increase GDP by about \$66 billion and create about 460,000 new jobs.

Overall, we conclude that the expected increase in investment spending by some repatriating firms and the expected increase in consumption spending by shareholders caused by a significant increase in the repatriation of foreign subsidiary earnings under the evaluated transition plan will have the following effects on the U.S. economy:

- An increase of at least \$208 billion in GDP
- An increase of at least 1.46 million jobs
- An increase of about \$80 billion in corporate tax revenues
- Additional tax revenues from personal income taxes paid by shareholders on additional capital gains and dividends

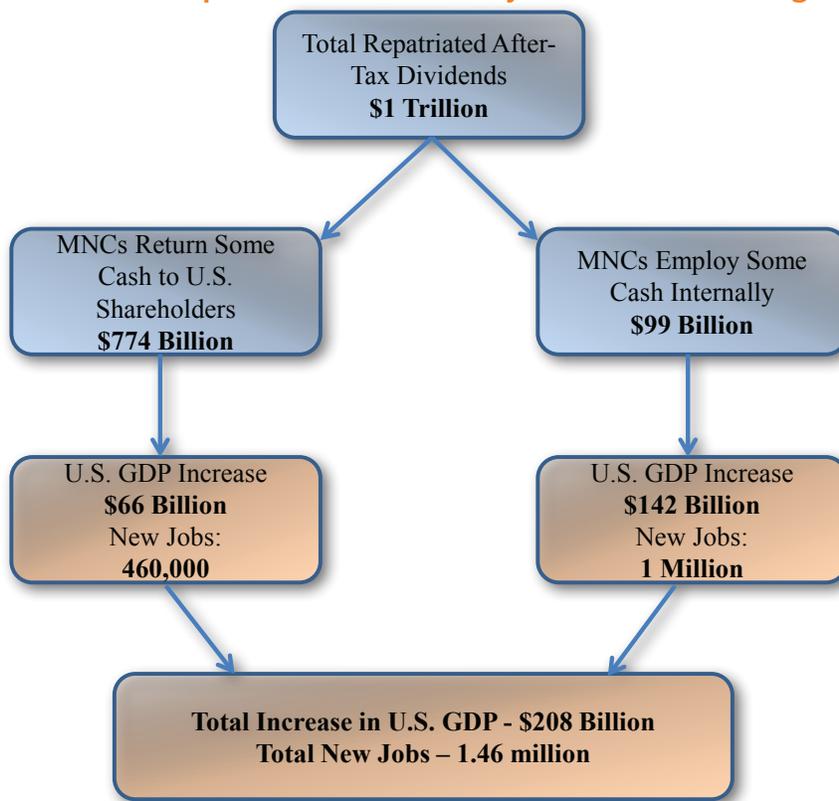
Figure 5 illustrates how the repatriation of previously accumulated foreign earnings under the transition plan will lead to increased economic activity in the United States.

⁸³ See discussion in section IV.2., “Impact of a Switch to the Stylized Territorial System on Lock-Out Cost” for the methodology used to calculate this amount.

⁸⁴ As discussed above, the portion of the monies returned to U.S. shareholders not used for consumption will likely also benefit the U.S. economy. This money is likely to be used to reduce household debt, add to household savings, or purchase alternative financial assets. However, our analysis does not include an estimate of this additional activity.

⁸⁵ The increased share prices will arise from what we refer to as the deferred tax liability effect and the agency effect. See Tyson et al. (2011) for more detail.

Figure 5: Effects of Repatriation of Previously Accumulated Foreign Earnings⁸⁶



V. Conclusion

In this paper, we analyzed and evaluated the likely impacts of a switch from the current U.S. international corporate income taxation system to a stylized territorial system that exempts 95 percent of repatriated active foreign source earnings from U.S. taxation and eliminates FTCs on exempted earnings. In our analysis, we evaluated the potential benefits and costs that will likely accompany such a switch. We conclude that the likely benefits outweigh the likely costs, particularly in the near term. We find that the major benefit from such a switch is a significant increase in the amount of U.S. MNC foreign earnings repatriated to the United States each year. This incremental repatriation will increase U.S. GDP and job formation without adding significantly to the U.S. budget deficit. We estimate that repatriated foreign earnings will increase by about \$114 billion per year, leading to at least 154,000 more U.S. jobs per year and annual GDP gains of about \$22 billion.

⁸⁶ Some portion of the after-tax dividends repatriated by U.S. MNCs will not be available to generate increased economic activity in the U.S. A portion of repatriated monies that will be distributed to shareholders will go to foreign shareholders. We do not assume these distributions will return to the U.S. economy. Additionally, while we expect firms that face capital constraints to undertake additional real investment following repatriation, we do not expect all of their repatriated funds to go toward this purpose, and we make no assumption as to the use of the residual repatriations of these firms. The difference between total after-tax repatriations and the amount we model as flowing in to the U.S. economy is composed of the amounts assumed going to foreign shareholders and not invested by capital-constrained firms. See Tyson et al. (2011) for detail on the methodology to segment firms, calculate expected repatriation totals, and track the flow of repatriated monies, and the macroeconomic multipliers used to arrive at these estimates.

We also examined the impact of a transition plan for the taxation of previously accumulated foreign earnings that are currently held abroad and have not been subject to U.S. taxation. We conclude that a transition plan with features similar to those proposed by Chairman Camp will have a dramatic impact on repatriation of these earnings, which are currently around \$2 trillion. We estimate that about \$1 trillion of these earnings will be repatriated, leading to an increase in U.S. GDP of about \$208 billion, 1.46 million new jobs, and about \$80 billion in tax revenues.

Our conclusions differ from those who oppose a territorial tax system in the United States. They generally argue that a territorial system will increase income shifting and reduce both jobs and tax revenues in the United States. Recently, opponents of a territorial system have used research by Kimberly Clausing to suggest that it would cost the U.S. 800,000 jobs.⁸⁷ Clausing's study focuses on the income-shifting responses of U.S. MNCs to a territorial system. She does not consider the impact of the incremental repatriation of currently locked-out foreign earnings on incremental job creation in the United States, an impact that we believe will be significant.

Clausing concludes that U.S. MNCs would add about 800,000 jobs in low-tax countries in a territorial system compared to the current system. Opponents of a territorial system have gone further to argue that these new jobs would come at the direct expense of jobs in the United States. In fact, this conclusion is not made in the Clausing paper, which focuses on the movement of jobs from high- to low-tax foreign locations, not on the movement of jobs from the U.S. to such locations.⁸⁸ While we do not critically evaluate Clausing's analysis in this paper, we do believe her results have been widely misused.⁸⁹

In our analysis, we conclude that additional *job shifting*—the movement abroad of real productive activities that currently reside in the United States—under the stylized territorial system will be limited. Absent material *job shifting*, it is unreasonable to suggest that the creation of these 800,000 new jobs in low-tax foreign locations would come at the expense of U.S. jobs.⁹⁰ Indeed, by both eliminating the lock-out costs of the current system on U.S. MNCs and strengthening the competitiveness of NIDs that cannot take advantage of deferral, a switch to a territorial system could result in more jobs in the United States.⁹¹

Many opponents of a territorial system acknowledge the value of repatriating locked-out foreign earnings. However, they argue that ending deferral rather than reducing the residual U.S. tax on repatriated income is the best way to increase both repatriations and corporate tax revenues. We believe that any proposal to end deferral is shortsighted and counterproductive. An end to deferral in the current system would damage the competitiveness of U.S. MNCs in global markets. Under the current system, deferral allows U.S. MNCs that are not capital constrained (i.e., IDs) to operate on a level playing field in foreign markets with their foreign competitors. Removing deferral would immediately put these U.S. MNCs at a significant competitive disadvantage: they would either become less profitable or lose market share. In either case, the United States would lose jobs and tax revenue.

87 Clausing, Kimberly A., "A Challenging Time for International Tax Policy," *Tax Notes* (July 16, 2012).

88 Although Clausing does not explicitly state the expected 800,000 jobs created in low-tax countries would be taken from the U.S., she does write that, given high U.S. unemployment rates, "...these new low-tax-country jobs could displace jobs at home." Such a conclusion does not directly follow from her analysis (which would suggest that these are not new jobs but rather jobs that were shifted from affiliates in higher tax counties). However, even if it were the case that outward FDI would increase following a switch to territorial, the tradeoff in jobs suggested by Clausing stands in stark contrast to her own work on the positive relationship between FDI and domestic economic activity.

89 While we do not directly address Clausing's analysis in this paper, her work was extensively critiqued in Hufbauer, Gary Clyde, "800,000 Jobs Shipped Overseas? Check the Math!" *Tax Notes* (August 6, 2012).

90 Our finding on this point is consistent with the analysis of Hufbauer (2012), who, in evaluating Clausing's study, stated that these purported new jobs in low-tax countries "... cannot be blithely attributed to employment responses between the U.S. parent company and its collected foreign affiliates." Other negative consequences could include an increase in corporate inversions (i.e., reincorporating abroad) and mergers with foreign firms to re-domicile the firm in a territorial country.

91 See for example, Desai, M.A., J.R. Hines, and C.F. Foley, "Domestic Effects of the Foreign Activities of US Multinationals," *American Economic Journal: Economic Policy* 1(1) (February 2009).

U.S. MNCs may also react to limiting or eliminating deferral under the current system by moving their headquarters to countries with both lower corporate tax rates and territorial systems through either corporate inversions (i.e., reincorporating abroad) and/or mergers with foreign firms. U.S. MNCs still locate significant shares of their real economic activities in the United States—65 percent of their sales, 68 percent of their employment, 70 percent of their capital investment, and 84 percent of their R&D in 2009.⁹² Much of the domestic employment and value-added of U.S. MNCs is related to headquarter functions, including extensive R&D activities. If U.S. MNCs were to move their headquarter functions out of the United States, the costs to the economy in terms of losses in value added, employment, wages, productivity, and R&D activities would be significant.⁹³

We acknowledge that compared to the current system, a territorial system will strengthen the incentives for income shifting through *IP shifting* and other tax-avoidance measures over time. But we do not agree that a territorial system will necessarily result in a meaningful decline in U.S. tax revenues, at least in the near to medium term. The incremental *IP shifting* that a switch to the stylized territorial system will encourage is not expected to have a large negative impact on corporate tax revenues compared to the current system, because most of the expected additional *IP shifting* will be carried out by firms that currently shield foreign royalties received from U.S. taxation. *IP shifting* that moves shielded royalty income out of the United States will not result in lower tax collections on this income compared to the current system. In fact, U.S. tax revenues will likely increase initially as a result of a switch to a territorial system, because foreign tax credits on active foreign earnings will disappear, making previously untaxed royalty income subject to U.S. tax until such income can be shifted abroad—and that will take time.

The only certain and immediate reduction in corporate taxes paid under a territorial system will come from NIDs—firms that are not able to defer repatriating foreign earnings indefinitely under the current system. These firms will pay lower corporate taxes in the United States under the stylized territorial system. But they will also unambiguously experience an improvement in competitiveness that will benefit both the firms and the U.S. economy.

Most countries that have introduced territorial systems have also added tough measures to combat tax avoidance and base erosion, and the OECD is currently evaluating additional anti-base measures at the request of its member states. We expect that similar measures would be included if the United States moved to a territorial system. In addition, we expect that a movement to a territorial system would be part of a comprehensive corporate tax reform that reduces the corporate tax rate significantly to around 25 percent, about the average of the other OECD countries. And a meaningful reduction in the corporate tax rate is the single most important thing the United States could do to counter the already significant income-shifting incentives in the current system and the even stronger incentives that would exist in a territorial system. Such a reduction would also strengthen the competitiveness of U.S. MNCs and of the United States as a production location, with significant benefits for U.S. growth and jobs.

92 See Slaughter and Tyson (2012).

93 See McKinsey Global Institute (2010).

VI. Bibliography

- Blouin, J., and L. Krull. (2009). “Bringing It Home: A Study of the Incentives Surrounding the Repatriation of Foreign Earnings Under the American Jobs Creation Act of 2004.”
- Blouin, J., L. Krull, and L. Robinson. (2009). *Is U.S. Multinational Intra-Firm Dividend Policy Influenced by Capital Market Incentives?* December.
- Business Roundtable. (2012). *Taxation of American Companies in the Global Marketplace: A Primer*, Exhibit 7. April. Accessed at: http://businessroundtable.org/uploads/studies-reports/downloads/Taxation_of_American_Companies.pdf
- Clausing, K. A. (2009). “Multifirm Tax Avoidance and Tax Policy.” *National Tax Journal* LXII(4).
- Clausing, K. A. (2012). “A Challenging Time for International Tax Policy.” *Tax Notes*. July 16.
- Committee on Ways and Means. (n.d.). “Business Leaders in Support of a Territorial Tax System.” Accessed at: http://waysandmeans.house.gov/uploadedfiles/intl_quotes.pdf
- Congressional Budget Office (CBO). (2011). *Reducing the Deficit: Spending and Revenue Options*. March.
- CBO. (2013). *Options for Taxing U.S. Multinational Corporations*. January.
- Desai, M. A., J. R. Hines, and C. F. Foley. (2009). “Domestic Effects of the Foreign Activities of US Multinationals.” *American Economic Journal: Economic Policy* 1(1). February.
- Devereux, M. P., and H. Freeman. (1995). “The Impact of Tax on Foreign Direct Investment: Empirical Evidence and Implications for Tax Integration Schemes.” *International Tax and Public Finance* 2.
- Dharmapala, D., C. F. Foley, and K. J. Forbes. (2011). “Watch What I Do, Not What I Say: The Unintended Consequences of the Homeland Investment Act.” *The Journal of Finance* 66.
- Dittmer, P. (2012). “A Global Perspective on Territorial Taxation.” *Tax Foundation*. August 10. Accessed at: <http://taxfoundation.org/article/global-perspective-territorial-taxation>
- Edwards, A., T. Kravet, and R. Wilson. (2012). “Permanently Reinvested Earnings and the Profitability of Foreign Cash Acquisitions.”
- Foley, C. F., J. C. Hartzell, S. Titman, and G. Twite. (2007). “Why Do Firms Hold So Much Cash? A Tax-Based Explanation.” Accessed at: <http://www.sciencedirect.com/science/article/pii/S0304405X07001390>
- Gerth, J., M. Murphy, and V. Houlder. (2011). “Corporations Couldn’t Wait to ‘Check the Box’ on Huge Tax Break.” *Propublica*. September 26. Accessed at <http://www.propublica.org/article/corporations-couldnt-wait-to-check-the-box-on-huge-tax-break>
- Gravelle, J. (2012). “Moving to a Territorial Income Tax: Options and Challenges.” Congressional Research Service Report R42624 for Congress. July 25.
- Grubert, H. (2001). “Enacting Dividend Exemption and Tax Revenue.” *National Tax Journal* LIV(4), 811–827.

- Grubert, H., and R. Altshuler. (2002). “Repatriation taxes, repatriation strategies and multinational financial policy.” *Journal of Public Economics* 87(1). Accessed at: <http://www.sciencedirect.com/science/article/pii/S0047272701001736>
- Grubert, H., and R. Altshuler. (2006). “Corporate Taxes in the World Economy: Reforming the Taxation of Cross-Border Income.”
- Grubert, H., and R. Altshuler. (2012). “Fixing the System: An Analysis of Alternative Proposals for the Reform of International Tax.”
- Hufbauer, G. C. (2012). “800,000 Jobs Shipped Overseas? Check the Math!” *Tax Notes*. August 6.
- Hufbauer, G., and M. Vieiro. (2011). “US Tax Discrimination Against Large Corporations Should be Discarded.” Policy Brief, Peterson Institute for International Economics, No. PB11-16.
- Internal Revenue Service. (2012). *SOI Tax Stats - Corporate Foreign Tax Credit*, Table 1. Last updated December 6. Accessed at: <http://www.irs.gov/uac/SOI-Tax-Stats-Corporate-Foreign-Tax-Credit-Table-1>
- Kleinbard, E. D., and P. Driessen. (2008). “A Revenue Estimate Case Study: The Repatriation Holiday Revisited.” *Tax Notes*. September 22.
- Markle, K. (2011). “A Comparison of the Tax-Motivated Income Shifting of Multinationals in Territorial and Worldwide Countries.” February 18. Available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1764031
- McKinsey Global Institute. (2010). “Growth and competitiveness in the United States: The role of its multinational companies.”
- Morrison, R. (2012). “Japan Disproves Fears of Territorial Taxation.” *Tax Foundation*. November 13. Accessed at: <http://taxfoundation.org/article/japan-disproves-fears-territorial-taxation>
- Mutti, J., and H. Grubert. (2009). “The Effect of Taxes on Royalties and the Migration of Intangible Assets Abroad.” In M. Reinsdorf and M. J. Slaughter (eds.), *International Trade in Services and Intangibles in the Era of Globalization*. National Bureau of Economic Research. University of Chicago Press.
- Organisation for Economic Co-operation and Development (OECD). (2013). *Addressing Base Erosion and Profit Shifting*. OECD Publishing. February 12. Accessed at: <http://dx.doi.org/10.1787/9789264192744-en>
- OECD. (n.d.). “Tax policy analysis—OECD Tax Database.” Accessed at: <http://www.oecd.org/tax/taxpolicyanalysis/oecdtdatabase.htm>
- OECD. (n.d.). iLibrary. Accessed at: <http://www.oecd-ilibrary.org>
- Petersen, M., and M. Faulkender. (2012). “Investment and Capital Constraints: Repatriations Under the American Jobs Creation Act,” *Review of Financial Studies*, 25(11). November.
- President’s Council on Jobs and Competitiveness. (2012). *Road Map to Renewal*. January. Accessed at: <http://www.jobs-council.com/recommendations/summary-of-road-map-to-renewal-report/>

- President's Economic Recovery Advisory Board. (2010). *Report on Tax Reform Options: Simplification, Compliance, and Corporate Taxation*. August.
- Slaughter, M., and Tyson, L. (2012). "A Warning Sign from Global Companies," *Harvard Business Review*, March.
- Tax Foundation. (2012). "The United Kingdom's Move to Territorial Taxation." November 14. Accessed at: <http://taxfoundation.org/article/united-kingdoms-move-territorial-taxation>
- Toder, E. (2012). "International Competitiveness: Who Competes Against Whom and For What?"
- Tyson, L., K. Serwin, and E. Drabkin. (2011). *The Benefits for the U.S. Economy of a Temporary Tax Reduction on the Repatriation of Foreign Subsidiary Earnings*. BRG Working Paper. Fall.
- U.S. Congress Joint Committee on Taxation. (2011). Letter to Representative Lloyd Doggett. April 15.
- U.S. Senate Permanent Subcommittee on Investigations. (2012). "Hearing on Offshore Profit Shifting and the U.S. Tax Code," Exhibit 2b. September 20.
- U.S. Senate Budget Committee. (2011). *Testimony of Dr. Rosanne Altshuler before the Senate Committee on the Budget*. February 2. Accessed at: http://budget.senate.gov/republican/public/index.cfm/files/serve?File_id=a4330db5-ec0e-4669-bb12-4392321a5c62

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