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U.S. Corporate Income Tax Reform and its Spillovers

by Kimberly Clausing, Edward Kleinbard, and Thornton Matheson

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I N T E R N A T I O N A L M O N E T A R Y F U N D

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Fiscal Affairs Department

U.S. Corporate Income Tax Reform and its Spillovers

Prepared by Kimberly Clausing, Edward Kleinbard and Thornton Matheson

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Abstract

This paper examines the main distortions of the U.S. corporate income tax (CIT), focusing on its international aspects, and proposes a set of reforms to alleviate them. A bold reform to replace the CIT with a corporate-level rent tax could induce efficiency-enhancing reform of the international tax system. Since fundamental reform is politically difficult, this paper also proposes an incremental reform that would reduce tax expenditures, reduce the CIT rate to 25-28 percent, and impose a minimum rent tax on foreign earnings. Finally, this paper analyzes empirically the likely impact of the incremental on corporate revenues outside the U.S.: Though a U.S. rate cut would likely lower revenues elsewhere, implementation of a strong minimum tax could more than offset that effect for most countries with effective tax rates above 15 percent.

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Author's E-Mail Address: kclausin@reed.edu; ekleinbard@law.usc.edu; tmatheson2@imf.org

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I. INTRODUCTION

1. **This paper examines the main distortions of the U.S. corporate income tax (CIT), focusing on its international aspects, and proposes a set of reforms to alleviate them.** In this endeavor, the paper draws on two background papers prepared by leading tax experts¹, as well as on the deep and sophisticated literature on the U.S. tax system generated by government, academia and research institutes. Section II gives a brief diagnostic summary of the U.S. CIT’s principle distortions, which are well known to the U.S. policy community.

2. **The current international tax system, founded on certain legal and accounting conventions² layered over a network of bilateral tax treaties, occasions a variety of avoidance behaviors.** The rising share of multinational enterprise (MNE) income reported in low-tax jurisdictions as a result of “stateless income” planning³—a trend facilitated by the rising share of corporate income from highly mobile intangible assets—has brought this issue to prominent concern among developed and developing countries alike. For example, in 2012 U.S.-headquartered MNEs report almost 60 percent of their foreign earnings in jurisdictions with effective tax rates⁴ of less than 5 percent (Table 1), and three quarters in states with rates of at most 15 percent.⁵ In response to the concerns that MNE avoidance has raised in many countries, the Organisation for Economic Cooperation and Development (OECD) Base Erosion and Profit Shifting (BEPS) project has produced action plans to address the most typical forms of income-shifting (Box 1).

Table 1: Distribution of Foreign Gross Income and Effective Tax Rates

Effective Tax Rate Range	Number of Countries	Total Share of MNE Income
Less than 5%	9	58.1%
5-15%	8	17.1%
15-25%	13	9.9%
25-35%	12	7.2%
Over 35%	9	7.6%

Source: Bureau of Economic Analysis, 2012 data

¹ Kim Clausing, Thormund A. Miller and Walter Mintz Professor of Economics at Reed College; and Edward Kleinbard, Ivadelle and Theodore Johnson Professor of Law and Business at the University of Southern California's Gould School of Law.

² Notably, the separation of entities, interest deductibility and arm’s-length pricing.

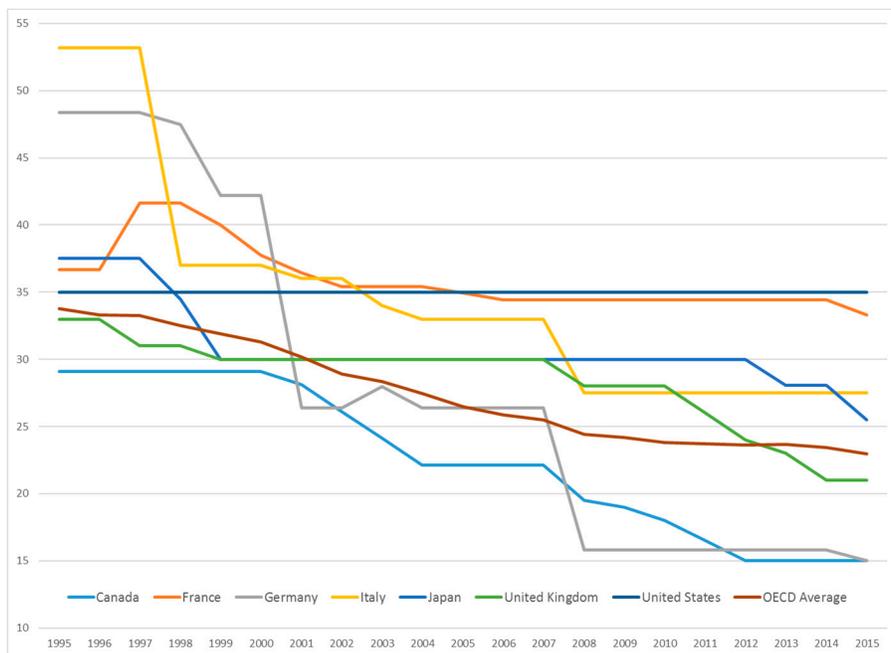
³ See Kleinbard (2011).

⁴ The ratio of total income taxes paid by U.S. MNE subsidiaries to their total pre-tax gross income, as reported on a country-by-country basis by the Bureau of Economic Analysis (BEA).

⁵ Table 1 shows the distribution of gross income by the effective tax rate (measured as foreign tax payments relative to gross income) of the host country. See Section V for a further discussion of these data.

3. **The U.S. CIT is quite vulnerable to income stripping on its inbound investment.** Its high statutory rate—which at 35 percent⁶ is the highest in the G-7 and well above the OECD average of 23 percent (Figure 1)—together with relatively weak thin capitalization rules⁷ particularly encourage the use of debt for this purpose. The recent wave of corporate inversions was largely motivated by the opportunity they created to strip income out of the U.S. using loans from the new foreign parent. The debt bias created by the high statutory rate also encourages leverage among purely domestic corporations, which along with a host of corporate tax expenditures undermines corporate revenues: The Government Accounting Office (2016), for example found that for 2006-2012, U.S. corporations paid an average effective tax rate of 14 percent.⁸

Figure 1. G-7 Statutory CIT Rates



Source: OECD.org

⁶ State-level corporate taxes add another 4 percent to this rate on average. However, this paper focuses on central government tax rates because it chiefly concerns cross-border taxation, and state-level taxes generally do not apply to foreign earnings.

⁷ IRC Section 163(j).

⁸ During that period, an annual average of two thirds of U.S. corporations reported zero taxable income. Among firms with at least \$10 million in assets, about 42 percent had no tax liability, and among large firms with positive financial profits that share was about 20 percent.

Box 1: OECD BEPS Project Outcomes

The outcomes of the BEPS project take a variety of forms. In four areas, there are **minimum standards**, the expectation being that domestic law and/or treaties will be amended so as to adopt them:

- To counter *treaty abuse* (Action 6), countries should include in treaties a “principle purposes test” provision and/or a limitation of benefits clause restricting access to treaty benefits.
- On *transfer pricing documentation and country-by-country reporting* (Action 13), MNEs should be required to make available general information on their activities to all countries in which they are active; more detailed transaction information specific to each country; and—for those with group turnover of more than €750 million—information on pre-tax profit and taxes paid and accrued in each jurisdiction. These data should be shared by the parent country in a manner consistent with its exchange of information agreements.
- In relation to *harmful tax practices* (Action 5), taxpayer rulings that raise BEPS concerns should be shared automatically. Deliberations on patent boxes led to a “nexus” principle that the preferential tax regime should only apply to taxpayers who have incurred substantial R&D expenditure in the jurisdiction.
- For *dispute resolution* (Action 14), countries should enact measures that ensure timely and good faith outcomes.

In some areas, guidance is captured by **amendments to core OECD reference documents**:

- The definition of a *permanent establishment* (PE) (Action 7) in the OECD Model Tax Convention will be widened to include, for instance, commissionaire arrangements (under which an agent undertakes sales without being the owner of the product) and to address avoidance of PE status by fragmentation of activities.
- On *transfer pricing* (Actions 8-10), the OECD Guidelines have been amended, notably to address artificial transfer of risk within groups and difficulties associated with intangibles: Taxation need not follow the legal ownership of an asset, and guidance is provided regarding hard-to-value transactions.

In other areas, the outcome is guidance on a **common approach**, with an aspiration of convergence:

- On *hybrid mismatch* (Action 2)—the potential difficulty arising when an entity or instrument is regarded differently in different countries—rules are introduced to ensure that deductions are not given unless the associated income is taxable to the recipient (albeit possibly, as a matter of policy, at a zero rate).
- *Interest deductions* (Action 4) should be limited to 10-30 percent of earnings before interest, taxes, depreciation and amortization (EBITDA), with carry forward of unused deductions or allowances, but with the possibility of allowing deductions up to the group-wide ratio of interest to EBITDA.
- Recommendations are given on details of *controlled foreign corporation* (CFC) rules (Action 3)—to ensure, for instance, that credit is given for any foreign taxes actually paid....
- ...and on provisions for *mandatory disclosure* (Action 12) of aggressive tax planning to enable the authorities to identify and address emerging risks.

Some recommendations, and the minimum standards in particular, will require **treaty changes**. To facilitate this:

- Work continues towards agreement, by the end of 2016, of a *multilateral instrument* (Action 15) that would simultaneously modify signatories’ treaties.

Ongoing work will flesh out various aspects of these broad outcomes, including: Use of the transactional profit split method, application of interest limitation rules to financial institutions, and transfer pricing issues for commodities. During 2016-7, a series of ‘**toolkits**’ will be developed by the OECD and other international organizations to apply the BEPS outcomes to the special circumstances of developing countries.

4. **In theory, worldwide tax systems with foreign tax credits promote efficiency from a global perspective:** By imposing the same final rate of tax on domestic and foreign earnings, they equalize the pre-tax returns to capital across jurisdictions. However, the U.S. system’s allowance for deferral of repatriation, along with its relatively liberal cross-crediting and controlled foreign company (CFC) rules,⁹ effectively convert the U.S. CIT into a quasi-territorial regime. The interaction of the high statutory rate and deferral discourages U.S. parent companies from repatriating their foreign earnings: The stockpile of undistributed earnings now totals more than \$2 trillion¹⁰.

5. **Given the United States’ preeminence as the world’s largest capital importer and exporter, a bold CIT reform could induce broader reform of the international tax system.** The goals of this reform should be to encourage the efficient allocation of investment, level the tax treatment of debt and equity, and discourage cross-border income shifting. The best way to accomplish the first two goals is arguably to shift from a tax on corporate income to a tax on economic rents,¹¹ such as a cash flow tax, allowance for corporate capital (ACC), or allowance for corporate equity (ACE).¹² The impact of U.S. adoption of a rent tax on profit-shifting would depend on the specifics of its cross-border regime—i.e., whether it was residence, source, or destination-based—as well as on its tax rate(s) and the strategic reactions of foreign countries. To avoid significant revenue loss, the normal return to capital could be taxed to investors, who are much less mobile than corporate capital, via a corporate-level withholding tax.¹³

6. **Since fundamental CIT reform is politically challenging, this paper also proposes an incremental reform based on recent reform proposals by both major political parties.** This revenue-neutral reform, detailed in Section IV, would make substantial progress toward the above goals and could serve as an intermediate step toward a particular form of rent tax—a

⁹ CFC rules, which are common to both worldwide and territorial CIT regimes, provide for current taxation in the residence country of foreign income from various sources. The U.S. CFC regime, governed by Sections 951-964 of the Internal Revenue Code (IRC), is referred to as “Subpart F”.

¹⁰ Citizens for Tax Justice, “Fortune 500 Companies Hold a Record \$2.4 Trillion Offshore,” <https://ctj.org/reports>, March 3, 2016. Bloomberg, “US Companies are Stashing \$2.1 Trillion Overseas to Avoid Taxes,” www.bloomberg.com/news, March 4, 2015. Non-repatriation of earnings undermines U.S. revenues, but it may not constrain domestic investment: See Section II.

¹¹ Economic rents, also referred to as supernormal profits, are returns in excess of the (risk-adjusted) market rate of return on capital investment, also referred to as the marginal rate of return. Whereas an income tax falls on both the normal and supernormal returns to investment, a rent tax falls solely on the latter, and therefore does not distort investment at the margin.

¹² On cash flow taxes, see Auerbach, Devereux and Simpson (2008); on the ACC, see Kleinbard (2007), and on the ACE, see Klemm (2007) and Michielse, de Mooij and van Peteghem (2015). Fundamental reform options are detailed in Section III.

¹³ See Section III for more details.

worldwide ACE or ACC. Finally, Section V presents an empirical analysis of how the incremental reform might impact tax revenues outside the U.S. Its principal finding is that, though a U.S. rate cut would likely lower tax revenues elsewhere, implementation of a strong minimum tax could more than offset that effect for most countries with tax rates above the minimum.

II. THE U.S. CIT REGIME: ISSUES FOR REFORM

General Considerations

7. **The problems with the current U.S. CIT regime, including its international aspects, are well known and acknowledged by both major political parties:** The relatively high statutory tax rate of 35 percent (Figure 1)¹⁴, combined with several other features of the code, distorts investment and encourages avoidance. Despite its high rate, U.S. CIT revenues relative to the corporate gross operating surplus are close the G-7 average: The average U.S. ratio of CIT revenue to corporate gross operating surplus over 2005-2010 was 13.2 percent, roughly equal to the non-U.S. G-7 average of 13.3 percent.¹⁵ This is due to the relatively narrow U.S. corporate tax base: Joint Committee on Taxation (JCT) estimates show that in fiscal year 2014 corporate tax expenditures reduced CIT revenues by roughly one third.¹⁶ The two largest expenditures, deferral of foreign active income of CFCs and accelerated depreciation, accounted for roughly 70 percent of total corporate tax expenditures. Table 2 shows revenue estimates for selected major business tax expenditures over the 10-year budget window.

¹⁴ As previously noted (footnote 6), this analysis focuses on federal-level taxation because state-level taxes do not apply to outbound U.S. investment. However, state-level tax regimes, which add another 4 points on average the U.S. CIT rate, do apply to inbound investment and are briefly considered at the end of this section.

¹⁵ OECD tax revenue database (<https://stats.oecd.org>)

¹⁶ JCT estimates summarized in Congressional Research Service (2014): CIT revenue in 2014 was \$321 billion, while corporate tax expenditures were \$154 billion.

Table 2: Revenue Estimates for Selected Major Business Tax Expenditures

Expenditure	Total	Corporate	Non-corporate
<i>US\$ billions</i>			
Deferred taxation of CFC earnings	812	812	0
Accelerated depreciation, machinery and equipment	307	195	112
Domestic production activities deduction	179	140	39
LIFO and LCM 1/	110	na	na
Like-kind exchanges 2/	88	57	31
Expensing of research and development costs	76	70	6
Fossil fuel preferences 1/	41	na	na
Graduated corporate tax rate	38	38	0
Exemption of credit union income	25	25	0
R&D tax credit	19	18	1

Source: Treasury (2016), covering 2015-2024, except: 1/ JCT (2016), covering 2017-2026; and 2/ JCT (2015), covering 2015-2019

8. **Due largely to generous depreciation allowances, U.S. marginal effective tax rates (METRs, Box 2) are generally well below the statutory rate.** In 2015, for example, the average firm-level METR on domestic investment was only 18.1 percent, compared to a non-U.S. G-7 average of 19.4 percent;¹⁷ without temporary bonus depreciation, which gives a additional 50 percent allowance, the METR would have been around 30 percent. There is also wide dispersion of METRs among different asset types: Firm-level METRs range from the low 20's for intangibles to almost 40 percent for inventories. A wide dispersion of METRs can lead to an inefficient allocation of capital, deterring productivity and growth.¹⁸ In general, generous depreciation allowances favor capital-intensive industries over services. Sector-specific tax breaks, such as deduction for domestic production activities¹⁹ also affect METRs and distort the allocation of capital across industries.

¹⁷ White House and Treasury (2016), henceforth cited as WH&T. Measure includes subnational corporate taxes but not individual taxes.

¹⁸ Auerbach, Aaron and Hall (1983).

¹⁹ Internal Revenue Code (IRC) Section 199

Box 2: Measuring Tax Burdens on Corporate Profits

Statutory tax rate: Also referred to as the nominal or headline rate, this is the marginal rate at which a company pays tax on its taxable profits. The statutory rate is the most visible and widely quoted measure of a country's corporate tax burden, and is an important determinant of the total tax burden on both marginal investments and the investments that earn rents. In addition, cross-country differences in statutory rates are the primary driver for multinational firms to engage in profit shifting.

Marginal effective tax rate (METR): This is a measure of the "tax wedge" between pre-tax and after-tax rates of return at the margin, where the return on the last dollar invested just covers its cost of capital. The METR is a theoretical, forward-looking measure of the tax disincentive to undertake additional investment that can be tailored to a particular type of asset. It combines information on both statutory tax rates and important features of the tax base, such as depreciation allowances and investment credits, and can be calculated either at the firm or the investor level. The METR typically assumes that taxpayers remit taxes according to the tax code, ignoring tax planning behavior.

Average tax rate (ATR): This retrospective measure, usually expressed as the ratio of tax revenues to total corporate profits (or gross operating surplus), captures the average income tax burden for the corporate sector. It reflects a variety of factors impacting overall revenues, including not only the statutory rate but also tax incentives and expenditures as well as compliance and enforcement. When data on corporate profits are unavailable, the ratio of CIT revenue to GDP is sometimes used, although changes in this ratio reflect not only the corporate tax burden but also structural factors like the size of the unincorporated business sector and cyclical fluctuations in the share of corporate profits in GDP.

Average effective tax rate (AETR): This measures the present value of the total expected tax burden on a discrete (as opposed to marginal) investment project, relative to the present value of expected profits. The AETR is bounded below by the METR, and above by the statutory rate: For a marginal project that just covers its cost of capital, the AETR equals the METR, but for highly profitable projects the AETR approaches the statutory rate. An important example of a discrete project is an MNE deciding where to locate a production plant; these types of location decisions will likely be driven by the AETR. Like the METR, the AETR is a theoretical, forward-looking measure that captures the impact of current and expected future taxes on the attractiveness of a new investment project.

9. **Since interest is deductible from corporate earnings while dividends are not, the high U.S. statutory CIT rate strongly favors debt-financed projects.** Indeed, the combination of interest deductibility, accelerated depreciation and the high CIT rate often produce a marginal tax subsidy for debt-financed projects. WH&T (2016) finds the average U.S. firm-level METR on debt projects to be -38.9 percent, vs. 27.3 percent for equity-financed projects. This debt bias could be corrected at the investor level if personal tax rates on interest income are sufficiently higher than rates on dividends and capital gains, which at first glance appears to be the case: In recognition of the heavier taxation of equity returns at the corporate level, (qualifying) dividends and (long-term) capital gains received by individuals are taxed at preferential rates of 0-20 percent, while interest income is taxed at ordinary income tax rates of up to 39.6 percent.²⁰ However, in practice high-bracket investors are likely to allocate taxable fixed-income investment to tax-exempt (municipal) bonds, while the taxable bond market (Treasuries, mortgages and corporates) is dominated by tax-exempt investors, such as pension funds and non-residents. Thus, investor-level taxes do not fully offset the corporate-level bias in favor of debt finance: WH&T (2016) calculates an average investor-level METR of 35.5 percent for equity-financed projects, while for debt finance the METR is close to zero. In addition to favoring firms with better access to credit, this “debt bias” can also contribute to economic fragility.²¹

10. **Due predominantly to large the U.S. non-corporate sector, the U.S. CIT yield in terms of GDP is well below the non-U.S. G-7 average.**²² According to the OECD, the average U.S. ratio of CIT revenue to GDP over 2005-2014 was 2.1 percent, compared with an average of 2.9 percent for the rest of the G-7; the U.S., with roughly 50 percent of total business income earned by “pass-through” entities, has the third-largest non-corporate sector among developed countries.²³ Pass-through businesses, which are subject only to the personal income tax (PIT), on the whole enjoy lower average and effective marginal tax rates than the U.S. corporate sector in respect of its domestic net business income. Cooper et al. (2015), for example, find that the “all-in” (investor-level tax inclusive) average tax rate (ATR) on distributed partnership income in 2011 was 15.9 percent, while the corresponding figure for distributed corporate income was 31.6 percent. Once comprising mostly sole proprietorships and partnerships, the U.S. pass-through sector has expanded greatly in recent decades due to the rapid growth of financial pass-

²⁰ Taxpayers with more than \$200,000 (single) or \$250,000 (joint) in income are subject to an additional 3.8 percent net investment income tax.

²¹ See, for example, De Mooij (2012).

²² The U.S. non-corporate sector comprises sole proprietorships, various types of partnerships, limited liability companies (LLCs) and S-corps.

²³ OECD (2015a). Germany, with about 70 percent of business income earned by non-corporate entities, has the largest non-corporate sector, followed by Austria, with about 55 percent. Domestic measures of the U.S. pass-through sector vary somewhat: JCT (2016a) finds a 43 percent income share, while WH&T (2016) finds a 60 percent share.

throughs as well as the spread of new business forms, such as S-corporations and limited liability companies. In general, however, businesses that wish to issue publicly traded stock are treated as C-corporations for tax purposes and thus face a higher level of taxation.²⁴

11. **The large unincorporated sector complicates CIT reform because, though subject to the PIT, pass-throughs calculate their incomes on the same base as C-corporations.** Pass-throughs would thus be disadvantaged by a base-broadening business tax reform because, unless there was a reduction in PIT as well as CIT rates, their tax burden would increase. This has been a major objection raised to some recent business tax reform blueprints.²⁵ Domestic pass-throughs are of little direct concern to the following evaluation of the U.S. international tax regime, however, since almost all foreign direct investment (FDI) both in and out of the United States relies on the corporate form.

Outbound FDI

Worldwide Regime with Deferral

12. **The policy debate on the U.S. international tax regime focuses predominantly on the taxation of outbound FDI—the increasingly anomalous U.S. “worldwide” regime.** In a nutshell, a worldwide system taxes resident corporations on their foreign earnings, typically with either a deduction or tax credit²⁶ for taxes paid on those earnings in foreign “source” countries. The residence country may either tax foreign earnings currently or, like the U.S., defer taxation until the earnings are repatriated via an actual or deemed dividend to the parent company. Worldwide taxation contrasts with “territorial” taxation, under which foreign earnings are exempt from taxation in the residence country. It is important to note, however, that the difference between worldwide and territorial taxation generally applies only to returns to equity, which are typically subject to CIT (and possibly also dividend withholding taxes) in the source country. Both types of regimes usually tax currently other foreign-source income, such as royalties and interest, which are deductible in the source country (although they may also be subject to cross-border withholding taxes when paid out).

13. **Both territorial and worldwide regimes usually also apply “CFC rules” calling for current domestic taxation of certain offshore income.** Types of income typically subject to CFC rules include passive income (e.g., dividends and interest earned from minority securities holdings) and income of entities located in low-tax jurisdictions. A minimum ownership

²⁴ IRC Section 7804. The exception to this rule is publicly traded partnership (PTPs), a form of business that can only be adopted by companies that derive most of their income from passive investments or certain oil and gas activities.

²⁵ For example, The President’s Economic Recovery and Advisory Board (2010).

²⁶ Deductions are subtracted from gross income to calculate net taxable income, whereas tax credits are subtracted directly from tax liability. The U.S. worldwide regime offers the more generous foreign tax credit.

threshold (typically 50 percent) usually applies. The U.S. CFC regime, known as “subpart F” (IRC Sections 951-965), taxes currently certain income received by foreign companies that are at least 50 percent owned by U.S. taxpayers holding at least 10 percent each. Income included under Subpart F derives from a variety of sources including passive income and certain related-party income.²⁷

14. **Once the norm among major capital exporters, worldwide taxation has in recent years become the exception as more OECD countries have adopted territoriality.**²⁸ Most recently, the United Kingdom (UK) and Japan switched from worldwide to effectively territorial systems in 2009. A major reason cited for this trend is the desire to avoid disadvantaging resident MNEs in bidding for foreign assets. Territoriality thus emphasizes the efficiency criterion of “capital import neutrality” (CIN), which requires that all investment in a given jurisdiction be subject to the same rate of tax; a variant of this criterion, capital ownership neutrality (CON), emphasizes the importance for economic growth of uniform taxation of investors bidding for a particular asset²⁹. A second major motive is the desire to avoid discouraging earnings repatriation. Like the U.S., both the British and Japanese worldwide systems deferred taxation of foreign earnings until repatriated. Their adoption of territorial regimes generated a wave of earnings repatriation, suggesting that worldwide systems do deter repatriation (although the steady-state effect of the territorial reforms have yet to be gauged).³⁰ A temporary repatriation tax holiday in the U.S. in 2005 had the same effect. U.S. MNEs’ current accumulation of more than \$2 trillion in unrepatriated earnings is attributed at least in part to their anticipation of another repatriation tax holiday or other favorable change in the tax treatment of repatriated income.

15. **The traditional rationale for worldwide taxation is that it provides an efficient allocation of capital investment by the criterion of “capital export neutrality” (CEN).** When a capital exporting country levies a worldwide tax with foreign tax credits (FTCs), it subjects all outbound investment to the same final tax rate regardless of location. Thus, the pre-tax return to investment across jurisdictions will be equalized, providing for an efficient allocation of capital. While CEN provides for efficiency from a global perspective, national export neutrality (NEN)

²⁷ For example, foreign base company sales income or foreign base company services income.

²⁸ By contrast, several large developing countries including China, Russia, India and Brazil maintain worldwide systems; however, in practice their worldwide taxation may be circumvented by routing outbound investment through a closely associated territorial country, such as Hong Kong for China. Remaining OECD countries with worldwide systems, such as Ireland, tend to have much lower CIT rates, thus alleviating concerns about repatriation taxes: Since worldwide tax systems usually offer foreign tax credits (FTCs) for foreign income taxes paid up to the level of the domestic CIT liability, relatively low-rate worldwide tax systems do not tend to impose any additional repatriation tax.

²⁹ Desai and Hines (2004).

³⁰ See Matheson, Perry and Veung (2014).

emphasizes the national interest of the capital-exporting country, which is to equate the foreign after-tax return to the domestic pretax return, thus offering only a deduction rather than a tax credit for foreign taxes.³¹

16. The efficiency argument for worldwide taxation elides two important factors: deferral and inversion. If MNEs are able to defer taxation of their foreign earnings until repatriation (and the legal separation of corporate entities generally provides for this), the rate-equalizing effects of a worldwide regime may be so attenuated as to be ineffective. Further, if the parent company of an MNE subject to a high-rate worldwide regime is able to relocate its headquarters to a low-rate worldwide or territorial jurisdiction, then the high-rate worldwide system is not efficient—or sustainable. Of course, the two factors can to some extent offset each other: an MNE resident in a high-tax worldwide jurisdiction will be less likely to invert if it can defer taxes on its unrepatriated income.

17. Inversion eases U.S. MNE access to unrepatriated earnings and ultimately helps them escape the U.S. worldwide CIT regime. U.S. parent companies not only cannot receive dividends from their foreign subsidiaries without paying repatriation tax; the foreign subs also cannot extend loans to their U.S. parents without the loan being treated as a “constructive dividend” and subjected to repatriation tax.³² A U.S. MNE that succeeds in inverting is still the direct owner of its pre-inversion foreign subsidiaries, and is hence still subject to repatriation tax on their earnings. However, the new foreign parent of an inverted U.S. MNE can access that MNE’s unrepatriated offshore earnings directly, provided former shareholders of the U.S. firm stay below the 60 percent ownership threshold for inversion status. To definitively free the U.S. company’s foreign subsidiaries from the U.S. worldwide tax net, further transactions are necessary to transfer their ownership to the new foreign parent.

18. In theory, deferral does not reduce the burden of repatriation taxes³³: As long as earnings are subject to tax upon repatriation, they may accumulate offshore indefinitely without reducing the present value of the repatriation tax, since the repatriation liability grows in proportion to the stock of offshore earnings. However, for financial statements—which are the chief concern of corporate management—U.S. generally accepted accounting principles (GAAP) allow companies to elide any deferred tax liability for foreign earnings which they have elected to maintain offshore indefinitely. Moreover, although foreign subsidiaries cannot extend loans to their U.S. parents without triggering repatriation tax, their parents can borrow domestically, implicitly using their offshore assets as collateral. Thus, MNEs have become adept at avoiding

³¹ For a discussion of international tax efficiency standards, see IMF (2014).

³² This restriction is not present in all worldwide systems. For example, prior to its 2009 adoption of territoriality, the UK permitted foreign subsidiaries to lend money to their UK parents without triggering repatriation tax; such loans were exceedingly common.

³³ Hartman, (1985); Sinn (1991)

the constraints of the U.S. worldwide tax regime, effectively operating in an “ersatz territorial” regime.³⁴

19. **Indeed, in many respects the U.S. worldwide tax regime is weaker than a territorial regime because it lacks certain protections common to the latter.** First, rather than taxing foreign income more heavily than a territorial regime, the U.S. worldwide regime may actually reduce overall revenues from that source. This is because excess FTCs generated by foreign equity earnings can be used to offset U.S. income tax on low-tax foreign income, such as interest and royalties.³⁵ Under a territorial regime, by contrast, foreign equity earnings are exempt and thus generate no FTCs, so other types of foreign income face a higher tax rate in the home country. For example, using 1996 data Grubert (2001) estimated that shifting to a territorial system would increase U.S. CIT revenue by \$9 billion per year.

20. **U.S. interest allocation rules are overly permissive, insofar as MNEs can deduct all domestic interest expense, even for debt that supports foreign investment.** (Restricting interest deductions to debt that finances domestic investment has been a perennial Obama budget reform proposal.) The only restriction that the current allocation rules impose is that interest from debt supporting foreign investment is deducted from total foreign income in calculating available FTCs. Since FTCs are limited to the U.S. tax liability on foreign income, any reduction of that income therefore reduces available FTCs, which may increase U.S. tax liability. The interest allocation rules may thus push an MNE from “excess credit” status, where FTCs exceed the U.S. tax liability on foreign income, to “excess limit” status, where marginal foreign income is subject to U.S. CIT.

Stateless Income Planning

21. **The restrictive bite of the interest allocation rules is increasingly undermined by MNEs’ aptitude at reducing their foreign taxes using cross-border financial engineering.**³⁶ This practice arbitrages differences among countries’ business tax regimes and tax treaty networks to minimize global tax burdens, notably by shifting corporate income from high-tax into low-tax (or no-tax) jurisdictions. Although this entails myriad practices, certain conventions and usages are prominent.

³⁴ Nonetheless, U.S. MNEs do incur avoidance costs, such as the bloating of their balance sheets from borrowing against unrepatriated earnings. [Grubert and Altshuler, 2008]

³⁵ Grubert and Altshuler (2008). Any excess FTCs are usually generated by foreign equity earnings, since the U.S. parent receives tax credit not just for any dividend withholding tax (WHT), but also source-country CIT. By contrast, interest and dividends are usually deductible from CIT in the source country, so the only FTCs that they generate are withholding taxes, which tend to be levied at a fairly low rate, particularly in countries where a tax treaty applies.

³⁶ Kleinbard (2011).

22. **First, even where there is 100 percent ownership, legal entities (corporations) are treated as separate for tax purposes.** One way in which this treatment is important for stateless income planning is through the establishment of equity-capitalized “financing subsidiaries” in low-tax jurisdictions, which fund operating companies in high-tax jurisdictions with high-coupon debt. The high interest rate, which provides generous deductions for the company in the high-tax jurisdiction, is justified as a return to the “risk” that the financing company has assumed in lending to the thinly capitalized operating company, even though at the consolidated MNE level there is no increase in overall risk from rearranging the debt and equity of its various subsidiaries.

23. **Second, MNEs use “hybrids”—instruments or entities with different tax characters in different jurisdictions—to maximize deductions and minimize inclusions.** One example is certain convertible bonds, whose payments are deductible as interest in the country of origin but includable as dividends in the receiving country; if the relevant tax rate in the country of origin exceeds that in the receiving country, the net tax rate for the transaction is negative. Another common type of hybrid depends upon a business’ legal form being classified differently by different jurisdictions. The U.S. introduction in 1997 of “check-the-box” rules, which permit entities to freely elect corporate or pass-through status for U.S. tax purposes (rather than having that status depend on their specific facts and circumstances), greatly facilitated this type of hybrid. For example, a U.S. MNE has a subsidiary (A) incorporated in a low-tax jurisdiction, which in turn owns a company (B) in a high-tax country (C). Country C views B as a corporation, but B has “checked the box” to be treated as a pass-through or “disregarded entity” for U.S. tax purposes. A extends a loan to B, and when B pays interest to A, country C recognizes the deduction as between two corporations; however, the U.S. recognizes neither the loan nor the interest income, since it views B as a disregarded entity. Thus, the MNE receives a deduction with no corresponding inclusion, lowering its worldwide taxable income.

24. **A critical factor in cross-border income shifting is the tremendous growth in recent decades of the share of MNE income generated by intangibles—patents, trademarks, goodwill, etc.**³⁷ Unlike other productive assets, such as plant and equipment, that must be located in jurisdictions with sufficient other resources such as labor and raw materials, intangibles are highly mobile. Once their ownership is established in a low-tax jurisdiction, their use can be licensed to subsidiaries in high-tax jurisdictions in exchange for royalties, generating deductions in high-tax jurisdictions and inclusions in low- or no-tax jurisdictions. Since intangibles tend to be unique to the MNEs that own them, they are very hard to value, which makes transfer pricing claims against excessive royalty deductions difficult.

25. **Once developed, intangibles can be owned from anywhere, but their development requires the presence of a skilled labor pool.** The challenge thus arises in shifting ownership of intangibles from their place of development (typically, a higher-tax country) to a low-tax

³⁷ Corrado and Hulten (2012) find that the rate of business investment in intangibles has outstripped other investment since 1990.

jurisdiction from which they can be exploited. Two common methods of doing this in the U.S. are contributing the intangible to an offshore entity at an early stage of its development, when its value is still unknown (and therefore low), and “cost-sharing” arrangements whereby the development activities are jointly financed by domestic and offshore entities, with ownership of the asset accruing to the latter.

26. **The U.S. offers two types of tax incentives for research and development—expensing of qualifying research and development (R&D) costs (IRC Section 174), and an R&D tax credit (IRC Section 41).** The tax credit is more narrowly targeted than expensing, both in terms of qualifying activities and in being given only for incremental R&D expenditure above a base amount, thus focusing it on stimulating marginal investment. Qualifying activities for both incentives must be performed in the U.S., but there is effectively no restriction on the location of ownership or exploitation of the resulting intangible: The United States calculates the R&D credit on a group-wide basis, and for this purpose includes foreign affiliates in the group. Foreign-controlled U.S. firms can also perform tax-creditable R&D in the United States, but treat the ownership of the resulting intangibles as residing outside the United States.³⁸

27. **In response to the migration of intangibles income to low-tax offshore jurisdictions, numerous countries have introduced “patent boxes”, which offer a reduced income tax rate for intangibles income.** Similar measures have been proposed in the U.S. by Camp (2014) and by House representatives Charles Boustany and Richard Neal in 2015. The OECD BEPS project Action 5 on harmful tax practices examined patent boxes, recognizing them as a means of stimulating R&D but proposing that their benefit be conditioned on significant local R&D expenditures (Box 1). This provision has raised U.S. concern that R&D activities will migrate to jurisdictions that have both high human capital and low tax rates on intangibles, notably European countries with patent boxes.

28. **Compared with tax benefits conditioned on R&D expenditures, patent boxes are an inefficient means of stimulating R&D activity.**³⁹ Rather than focusing tax breaks on the performance of (additional) research activity, patent boxes give a windfall tax break to income from existing intangibles. Patent boxes thus appear better tailored to encouraging relocation of existing intangibles than development of new ones, but the positive spillovers from R&D derive from the performance of those activities rather than the post-development location of intangibles.⁴⁰

³⁸ For a more detailed discussion of these issues, see Milone et. al. (2013) and JCT (2010).

³⁹ See IMF (2016).

⁴⁰ See, for example, Sullivan (2015a and 2015b).

Inbound FDI

29. **Though the debate on U.S. international tax reform focuses on the regime for outbound investment, the environment for inbound investment is also important.** In addition to being the world's largest capital exporter, the U.S. is also the world's largest capital importer, with an almost \$3 trillion inbound FDI stock as of 2014.⁴¹ In some respects, inbound FDI faces the same tax incentives as domestic investment, with certain notable distinctions. Whereas tax incentives such as accelerated depreciation moderate the effect of the high U.S. statutory rate with regard to marginal investments, it is the statutory rate itself that applies to economic rents, which MNEs commonly generate. And for purposes of cross-border profit-shifting, it is the U.S.-foreign statutory rate differential (which Figure 1 shows has been widening) that matters.

30. **Foreign-owned U.S. MNEs operate in a privileged tax environment compared to domestically owned firms, given their greater ability to shift income out of the U.S.** The presence of a foreign parent firm, coupled with the weakness of U.S. thin capitalization and transfer pricing rules, make it relatively easy for U.S. subsidiaries of foreign MNEs to reduce their U.S. tax burden via "income stripping". One of the most common practices is for the foreign parent to capitalize its U.S. subsidiary with debt and extract profits via interest payments, thereby hollowing out its U.S. tax base.⁴² Since MNEs typically possess valuable intangibles that they locate in low-tax jurisdictions, another common method is to charge high royalties for their exploitation. The greater ability of foreign-owned firms to reduce their U.S. tax burden via income-stripping is likely to place domestic firms at a competitive disadvantage.

31. **For U.S.-based MNEs, the ability to access the tax-privileged environment of foreign MNEs is one of the most important motivations behind the recent surge in corporate inversions** (Kleinbard, 2014). In an inversion, a U.S. multinational firm acquires a smaller competitor resident in a more tax-congenial jurisdiction, but structures the transaction upside-down so that the foreign "minnow" acquires the stock of the U.S. "whale".⁴³ By creating a foreign parent company above it, the U.S. firm is able to reduce its domestic effective tax rate through related-party payments, most often interest expense, which is subject only to the high ceiling imposed by U.S. thin capitalization rules.⁴⁴ The U.S. Treasury has issued successive

⁴¹ International Monetary Fund, Coordinated Direct Investment Survey Database, <http://data.imf.org/?sk=40313609-F037-48C1-84B1-E1F1CE54D6D5&slId=1390030109571>. China is second with \$2.2 trillion.

⁴² Sullivan (2016) considers whether earnings stripping constitutes a form of investment incentive.

⁴³ The combination presumptively makes business sense, but the upside down acquisition structure does not, excepting U.S. tax considerations. Code section 7874 defines an inversion as one in which former shareholders of the U.S. firm control at least 60 percent of the combined company.

⁴⁴ It is critical that the foreign firm be a parent; U.S. MNEs cannot receive loans from their foreign subsidiaries without the loan being deemed a constructive dividend.

waves of regulation aimed at curbing corporate inversions, but has made clear that the problem requires a legislative solution.

32. **Stateless income planning allows U.S. MNEs to exploit local “tax rents”.**⁴⁵ If the domestic CIT rate in each country determines the level of pre-tax returns to investment, then high-tax countries should offer higher pre-tax returns. U.S. MNEs therefore have an incentive to invest in high-tax countries to recoup the corresponding high level of profits and either strip income out of those jurisdictions using the aforementioned methods or generate foreign tax credits to offset U.S. taxes on foreign interest and royalty income.

33. **Purely domestic firms in high-tax countries have difficulty competing with MNEs, given the latter’s ability to reduce their tax burden via cross-border income shifting.** This—much more than the effect of repatriation taxes on U.S. MNE’s ability to bid successfully for foreign assets—is the true competitiveness issue with regard to the current international tax regime.⁴⁶ For domestic U.S. firms, the lighter tax burden of pass-through status may thus function as an offset to the tax advantages enjoyed by MNEs—although purely domestic C-corporations do not share this advantage.

34. **This study has thus far abstracted from state-level corporate tax regimes, since they do not apply to outbound investment.** However, they may still influence U.S. investment by both resident and foreign investors, for which a topical concern is whether certain U.S. state regimes may serve as internal “tax havens.”⁴⁷ A discussion of this issue is presented in Box 3.

⁴⁵ Kleinbard (2007).

⁴⁶ Kleinbard (2014).

⁴⁷ See, for example, “Delaware: An Onshore Tax Haven,” Institute for Taxation and Economic Policy, <http://itep.org>.

Box 3: Are Some US States “Tax Havens?”

Absence of federal beneficial ownership disclosure requirements can facilitate illegal tax evasion—US or otherwise—in regard to assets held through pass-through entities in certain states, as well as other illegal activities such as money laundering. Entities such as, for example, Delaware limited liability corporations (LLCs), cannot legally protect US citizens from US tax liabilities—just as putting assets in offshore “havens” cannot. However, the lack of beneficial ownership disclosure requirements in some states can facilitate US persons’ evasion of taxes through the use of offshore trusts as the “owners” of such pass through entities, since such entities with only one owner are disregarded for US tax purposes. Failure to pay US taxes on income held by such an entity that ultimately benefits a US person is illegal. However, if a Delaware LLC has only one owner, who is not a US resident, no US taxes would be legally owed with regard to income accruing to that entity from *non-US assets*. Of course, the non-US beneficial owner of such an entity might owe taxes to his home jurisdiction, and lack of beneficial ownership disclosure requirements would prevent the US authorities from sharing information with that jurisdiction.

In contrast, neither corporations nor pass-through entities formed in US states—with or without beneficial ownership disclosure requirements—are well suited to serve as tax conduit jurisdictions in multinational corporate planning/avoidance schemes.¹ No U.S. state can provide low-tax or no-tax treatment of corporations or individuals under US federal income tax law. In the case of *corporations*, any transfer of foreign source income to a Delaware parent will attract U.S. state and federal corporation tax, and there would be U.S. withholding tax on onward payments of interest or dividends—which makes such corporations unsuitable as links in tax planning structures for multi-national companies. Use of Delaware LLCs (for example) as conduits, while apparently possible in theory, is in practice problematic: The tax treatment of Delaware LLCs by foreign jurisdictions has been both uncertain and in some cases unfavorable in this regard: There has sometimes been conflicting tax treatment under foreign law, and claims for benefit under U.S. double taxation treaties have given rise to litigation in more than one country.

III. FUNDAMENTAL REFORM OPTIONS

35. **The U.S. should consider transforming the CIT into a rent tax to reap the important efficiency gains of exempting the normal return to capital at the firm level.** The case for a rent tax is powerful, resting on the idea that marginal investments will face a zero tax rate, so that for marginal investments the incentive to invest is the same after tax as before tax. In addition, a rent tax obviates the differences between debt and equity financing, which as a practical matter are at least as large a distortion in the current CIT as is the tax wedge on marginal investments.⁴⁸ Various methods can deliver this result, including a cash flow tax (CFT), an allowance for corporate equity (ACE), an allowance for corporate capital (ACC).

36. **Though rent taxes eliminate distortions to marginal investment, they may still affect discrete investment choices across countries as well as profit-shifting.** Corporations choose the location for new investment projects based on the present discounted value of expected after-tax returns, for which the tax rate of concern is the average effective tax rate (Box 2). Even where the tax rate on a marginal investment is zero, a rent tax will reduce the value of any project expected to yield above-normal returns. All else equal, countries that offer higher location-specific rents, such as natural resources or a large consumer market, can impose a higher AETR. The effective tax rate for pure profit-shifting—that is, any increase in income not associated with an underlying investment or capital increase—will be the full statutory rate.

37. **One means of levelling the tax treatment of debt and equity is an ACE or ACC, which allow a deduction for the cost of both equity and debt capital.** Like a standard income tax, an ACE allows full deduction of interest, plus a notional deduction for equity capital. Several countries, including Belgium, Italy, Brazil and Croatia have thus far implemented ACEs.⁴⁹ An ACC, by contrast, disallows actual interest deductions but gives a notional deduction for all corporate capital—debt and equity—at the same rate. If the allowance rate equals a corporation's borrowing rate, the two regimes are equivalent. By allowing the tax allowance rates for debt and equity to differ, an ACE may preserve some tax advantage (or disadvantage) for debt finance.

38. **Another option for rent taxation is a cash-flow tax, under which capital investment is immediately expensed.**⁵⁰ One advantage of a CFT, in contrast to rent taxes that rely on an administrated capital or equity allowance rate, is that expensing automatically grants a company a tax uplift on its investment commensurate with its own discount rate, which is likely to vary

⁴⁸ The distinction between debt and equity financing could also be leveled under an income tax by diallowing a deduction for interest, as under the comprehensive business income tax proposed in U.S. Treasury (1992).

⁴⁹ For details of these countries' experience, see Klemm (2007) and Michielse, de Mooij and van Peteghem (2015).

⁵⁰ For a full discussion of cash flow taxes, see Meade (1978), Auerbach, Devereux and Simpson (2007). Auerbach (2010) and Auerbach and Devereux (2013) discuss destination-based CFTs.

significantly among firms; determining the “correct” rate for the equity allowance may thus be quite difficult. Conversely, a disadvantage of CFTs is that their investment neutrality depends upon the tax rate remaining constant over time. As for an ACC, the tax treatment of debt and equity is leveled under a CFT, although several different regimes for handling financial flows are possible, some of which are more easily applied to the financial sector than others.⁵¹ One potential issue regarding cash flow taxes is whether they qualify for tax treaty privileges; an ACE, which preserves interest deductions, is less likely to encounter obstacles in this respect.

39. In principle, any corporate income or rent tax could be levied on either a source (territorial) or residence (worldwide) basis. The increasing difficulty of determining the source of some types of corporate income has also spurred proposals to levy tax on a destination (sales) basis. The salient proposal for a sales-based rent tax is the Auerbach-Devereux destination-based cash-flow tax (DBCFT), essentially a destination-based VAT with a deduction for wages.⁵² Sales-based formulary apportionment calls for income taxation on a destination basis, with corporate worldwide profits allocated to countries according to their share of third-party sales.⁵³ An intriguing variant on this proposal arising from transfer pricing practice, the residual profit split method,⁵⁴ splits corporate income into normal returns and rents: A normal return is imputed to each jurisdiction based on its share of global expenditures, with the residual (rents, which could be negative) then allocated among jurisdictions according to their share of final sales. Abstracting from its normal return component, the residual profit split method is thus a worldwide destination-based rent tax.

40. This study proposes that the U.S. give particular consideration to implementing a consolidated worldwide ACE or ACC, with foreign tax credits but without deferral. The principal reason to adopt a worldwide regime (without deferral) is that it puts a stop to stateless income tax planning, and does so in a way that imposes the same burdens on foreign and domestic investment by U.S. firms – that is, it is consistent with capital export neutrality. Admittedly, CEN is only one margin among many by which neutrality can be measured, but in light of the importance of U.S. firms within the global economy, it remains a serious consideration. Worldwide consolidation is the basis on which firms present their financial accounts to investors, and reform of the U.S. definition of corporate residence to depend on

⁵¹ A cash flow tax may be based only on non-financial flows (R-base), on all non-financial and debt flows (including principal amounts, R+F base), or on net equity flows (S-base). Under an R-base CFT, interest deductions are disallowed. Unless an R+F base is used, a special regime may be necessary for the financial sector.

⁵² In addition to the question of whether a DBCFT would qualify for treaty benefits, its taxation of imports and exemption of exports could run afoul of the World Trade Organization prohibition on border-adjusted direct taxes.

⁵³ See, for example, Avi-Yonah and Clausing (2008). Other apportionment factors have also been proposed, such as wages, employment, and assets.

⁵⁴ See Avi-Yonah, Clausing and Durst (2008).

investor residence would align it more closely with commercial realities.⁵⁵ While all forms of rent tax eliminate the tax burden on marginal projects and equalize the tax treatment of debt and equity, they do not all reduce cross-border tax arbitrage to the same extent.⁵⁶

41. **Repealing deferral would necessitate a significant reduction in the statutory rate in order to lessen inversion pressures.** However, the equity allowance will lessen these pressures relative to an income tax of the same rate.⁵⁷ The broad worldwide base and repeal of deferral would help finance a rate cut, as would domestic base-broadening. Regarding accelerated depreciation, in theory the rate of tax depreciation under an ACE or ACC is irrelevant, since any increase in depreciation allowances is offset by a reduction of the capital base for which the allowance is granted. The transition regime chosen for existing capital could, however, have a significant revenue impact. Applying the equity allowance only to new investment, as was done in Austria and Italy, would reduce the near-term revenue cost of the reform.⁵⁸

42. **Implementation of an ACE or ACC would entail numerous design decisions.** These include transitional provisions (treatment of the existing capital stock), determination of the equity or capital allowance rate, and the definition of corporate groups. The experience of several precursor regimes—in Austria, Belgium, Brazil, Croatia and Italy—could help inform these decisions.

Investor-level Taxation

43. **A common objection to rent taxes is that they undertax capital income, which is particularly inapposite at a time of sharply rising income and wealth inequality.** While it is true that, for a given tax rate, a rent tax raises less revenue than a well-designed business income tax, the tax rate need not be identical. Under a worldwide regime, the tax rate cannot be too high lest it incent inversion; however, all else equal the equity allowance will lessen this pressure..

⁵⁵ In practice there is little confusion over which public firms consider themselves to be U.S. business enterprises. Moreover, the United States is in a different position from most other large open economies, because even today official statistics show that U.S. citizens ultimately own 80 percent or more of U.S. firms' equity (Federal Reserve Board Flow of Funds data, www.federalreserve.gov). This means that from the perspective of U.S. tax system design, a U.S. resident company can be viewed as a rough proxy for U.S. persons.

⁵⁶ Grubert (2015) discusses some of the cross-border arbitrage opportunities that could arise under a destination-based tax.

⁵⁷ Grubert and Altshuler (2008) examine the effect of the U.S. unilaterally repealing deferral; they find that this would require a sharply lower CIT rate in order to avoid greatly increasing inversion incentives. By contrast, a DBCFT would have to have a higher rate to raise the same revenue as even a territorial tax, since it relinquishes any claim to tax rents from foreign sales of U.S. intangibles; however, the favorable conditions for U.S. ownership of intangibles could stimulate domestic R&D activity.

⁵⁸ Klemm (2007).

44. **To address this issue, a business-level rent tax can be combined with investor-level taxation of the normal return to capital, such that the combination of the two operates as a single tax on capital income.**⁵⁹ Taxing investors on normal returns means taxing savings, but effectively exempting supernormal returns (which would be taxed at the business enterprise level). Whether taxing investors on their normal returns has a systematic effect on the quantity of savings is itself a debated question, but in any event this taxation is part of the U.S. income tax system today. So a move to a business-level rent tax, combined with a more targeted and better-measured investor tax on normal returns, should improve the efficiency of business enterprise decision-making to the extent that managers focus on corporate-level taxes, while having only minimal distortions on investor behavior compared with current law.

45. **Issues of inequality can be addressed in part by the design of the investor-level tax.** Capital income taxes have often been denounced as particularly distortive due to their compounding effect, whereby income produced from the investment of previously taxed income is re-taxed when earned.⁶⁰ However, insofar as a disproportionate share of (taxable) capital is held by the wealthy, this compounding of tax on capital income can impart an important element of progressivity to the tax system. The design of a capital income tax should take into account its compounding effect, which obviates the need to impose a high tax rate in any given period. A low, flat-rate income tax on all normal returns to capital,⁶¹ measured and collected annually, is progressive over time because the effective tax rate on savings increases the longer they remain unconsumed. From this perspective, the tax wedge on savings is a feature, not a bug.

46. **Moving the taxation of normal returns to the investor level is desirable for international tax system design as well.** Investors are less mobile than are firms, or firms' capital⁶², and the state's claim to taxing resident or citizens' worldwide incomes is a better-accepted global tax jurisdictional norm than is any theory of the source of business income, or the residence of a multinational business firm. By taxing rents and net returns to risk to the firm,

⁵⁹ Kleinbard (2016) discusses these themes in detail.

⁶⁰ For a review of this literature, see Judd (1999). This strand of literature generally recommends the replacement of income taxes with a consumption tax, which taxes only the return to labor plus supernormal profits.

⁶¹ To minimize opportunities for tax arbitrage, an ideal dual income tax imposes the same low, flat rate of tax on all types of capital income: corporate profits, dividends, interest, capital gains, royalties and rents. Going further, Kleinbard (2016) proposes taxing the normal return to capital on an imputed basis that abstracts from investment cash flows, including capital gains realizations. This paper supports the concept of a uniform, flat-rate tax on investor-level returns to capital, but a thorough consideration of design is beyond its scope.

⁶² Individual investors can also shift income offshore – see, for example, Zucman (2014). However, at least in the U.S. this is more difficult for individuals than businesses, particularly since the 2010 enactment of the foreign account tax compliance Act (FATCA), which requires foreign financial institutions to report to the IRS on assets held by U.S. residents.

and normal returns to investors, a state puts itself on more secure footing to collect revenue from capital owned by its residents or citizens.

47. **Withholding tax on the normal return to capital at the corporate level for all corporate investors would conserve revenue and increase progressivity.** It is estimated that in 2015 as little as one quarter of U.S. corporate shares were held by taxable domestic investors, and another quarter by foreigners.⁶³ Income tax paid at the corporate level thus functions as a withholding tax on distributions to untaxed entities including pension funds and non-profits. The incidence of this withholding tax is quite progressive, since pension assets are skewed toward the upper end of the income distribution.⁶⁴ To limit the scope of the tax reduction for these entities—who in any event benefit from the reduction in the statutory corporate tax rate—the tax on the normal return should arguably be withheld at the corporate level and made creditable for taxable investors but final for tax-exempts.

IV. INCREMENTAL REFORM PROPOSAL

48. **If a direct move to a rent tax is infeasible, the following measures, which draw from business tax reform plans presented by both major political parties,⁶⁵ would alleviate the major issues outlined in Section II:** (1) Distortion of investment incentives; (2) debt bias; (3) profit-shifting; and (4) taxing intangibles income. Political feasibility likely requires business tax reform to be revenue-neutral at the business level; this proposal therefore conforms with that condition, including the impact of base-broadening on the non-corporate sector.

General Reforms

49. **Reduce the statutory CIT rate to a flat 25-28 percent.**⁶⁶ A lower CIT rate is needed not only to improve general investment incentives and reduce the debt bias, but also to reduce incentives to strip income out of the U.S.⁶⁷ Given the continuing downward march of global CIT rates and the infrequency of U.S. opportunities for tax reform, some proposals call for a CIT rate

⁶³ Rosenthal and Austin (2016). Withholding tax on U.S. dividends paid to foreign investors is generally 30 percent, but this rate is often reduced by tax treaty to 5-15 percent.

⁶⁴ For example, CBO (2013) reports that 66 percent of the tax expenditure for pension deductions and income accrue to the top income quintile.

⁶⁵ Notably, WH&T (2016) and Camp (2014).

⁶⁶ The exact level of the CIT rate should be chosen based on revenue needs and the politically feasible extent of base-broadening for unincorporated businesses and tax-exempt investors, as well as the potential impact on cross-border activity and strategic reactions. For concreteness, the empirical work in this study assumes a reduction to 25 percent.

⁶⁷ Though for outbound investment imposition of a minimum tax is arguably the most critical measure to prevent income-stripping, the rate cut is critical to reduce income-stripping on inbound investment.

as low as 15 percent.⁶⁸ However, research shows that larger economies, which attract investment to exploit their internal markets as well as their productive resources, can sustain higher CIT rates.⁶⁹ The U.S.' status as the world's largest consumer market should therefore enable it to sustain an above-average CIT rate for the foreseeable future. As noted in Section II, the large share of tax-exempt corporate investors also places a premium on conserving corporate-level taxes. The reduced CIT rates currently charged on low income levels, most of which are phased out for incomes above \$100,000, are an ineffective tax break for small businesses, most of which are organized as pass-throughs; they largely serve to complicate administration and should be eliminated.

50. Cutting the U.S. rate below the current OECD median of 25 percent should be avoided due to its effects on global tax competition. Indeed, any reduction in the U.S. CIT rate will likely cause some rate-lowering response in other countries. The rate-cutting, base-broadening CIT reforms that followed the U.S. CIT rate reduction of the late 1980s lowered the average OECD statutory rate by 20 percentage points.⁷⁰

51. A substantial reduction in the CIT rate would also increase income-sheltering opportunities for high-income taxpayers. Under current law, individuals who face the top marginal personal income tax (PIT) rate of 43.4 percent⁷¹ have an incentive to incorporate – whether to earn active business or passive investment income – provided that they are willing to retain at least 65 percent of their income in the corporation. Assuming PIT rates are unchanged, cutting the CIT rate to 25 percent would make incorporation profitable for top-bracket taxpayers provided they retain only 2.1 percent of their income in the corporation.⁷² Many current pass-through businesses could therefore be expected to incorporate in response to the proposed reform, and private investors to form personal investment corporations.

52. Broaden the corporate tax base to raise revenue to finance a rate cut and reduce dispersion of investment incentives across assets and industries. Camp (2014) provides a useful rubric for streamlining business tax expenditures, which are summarized in Table 2. Depreciation allowances should be extended to align them better with economic depreciation. The domestic production activities deduction (Section 199), which effectively provides a tax rate cut to a broad range of export-oriented activities, would be obviated by the general CIT rate reduction. Numerous tax incentives benefitting the fossil fuels industry, including publicly traded

⁶⁸ See, for example, Altshuler and Grubert (2016), Toder and Viard (2015), and Trump (2016).

⁶⁹ See, for example, Keen and Konrad (2014), Clausing (2007).

⁷⁰ For a discussion of OECD tax competition, see Devereux, Lockwood and Redoano (2008). For a discussion of the U.S.' leading role in international tax competition, see Altshuler and Goodspeed (2015).

⁷¹ This includes the top marginal PIT rate of 39.6 percent plus the 3.8 percent net investment tax.

⁷² See, for example, Gravelle (2014).

partnerships (PTPs), should be eliminated on environmental grounds as well.⁷³ Streamlining CIT expenditures should allow for elimination of the corporate alternative minimum tax (AMT), which would ease administration and compliance.

53. **Because rate-cutting, base-broadening reforms tend to reduce AETRs more than METRs, they generally benefit MNEs more than small domestic businesses.**⁷⁴ Since MNEs generally earn significant rents, while domestic firms tend to be more marginally profitable, the former benefit disproportionately from AETR-reducing reforms. As noted in Section II, domestic firms suffer competitively under the current regime from MNEs' greater ability to reduce their U.S. tax burden via cross-border income shifting. These considerations emphasize the importance for the viability of the reform of discouraging cross-border income-stripping and expanding tax preferences for marginal businesses.

54. **Rationalize and expand tax preferences for small business.** As previously noted, eliminating business tax expenditures impacts not just corporations but also pass-throughs, which do not benefit from the CIT rate cut. The U.S. pass-through sector includes many large, profitable businesses, so base-broadening relief should be focused on small businesses that are more likely to be marginally profitable. WH&T (2016) proposes several good measures to advance this goal: For example, allowing up to \$1 million in investment expensing, offsetting the cost of reduced depreciation allowances and doubling the ceilings for cash accounting and the start-up cost deduction.

55. **Focus, simplify and expand tax incentives for R&D.** The R&D tax credit is arguably a better tool for subsidizing R&D spillovers than expensing, since the list of qualifying activities for the credit is narrower, and it is also conditioned on incremental expense. Now that the credit has been made permanent, the list of qualifying activities should be reviewed to ensure that the credit is focused on activities likely to generate positive spillovers. The current structure of the credit is arguably too complex in determining the relevant baseline level of expenditures beyond which incremental R&D work is eligible for the credit. WH&T (2016) provides a useful rubric for simplifying the R&D credit's computation and making it more generous. If expensing is curtailed under the rubric of base-broadening, as proposed by Camp (2014), the scope of the R&D credit could be further expanded through some of the following measures: It could be made (partially) refundable, as in the UK;⁷⁵ it could be carried forward with interest; and/or, it

⁷³ See U.S. Department of the Treasury (2016) for a detailed list of tax expenditures benefitting the oil sector. A few real estate and investment companies also benefit from PTP status, but could potentially qualify for other tradable pass-through forms, i.e. RIC or REIT status.

⁷⁴ Devereux et al. (2002)

⁷⁵ This would have a direct cash flow benefit for startup firms, beyond that already contemplated by the payroll tax offset rules for small businesses. It could, however, raise administrative challenges. The United Kingdom undertook a public consultation on the design of refundable R&D credits in 2011-12:

could be made fungible with regard to mergers and acquisitions. (Like net operating losses, R&D tax credits are currently disallowed following a change of ownership.)

56. **The U.S. should also restrict the benefits of the R&D tax credit to the creation of assets that will generate U.S. taxable income.** Through the tax subsidy of the R&D credit, the United States effectively becomes a co-investor in the R&D work and can reasonably assert that it should receive some of the resulting returns. Addressing this would require a careful technical scrubbing of the interaction of the R&D credit (and in particular its group rules) with the cost sharing and other international tax rules of the CIT.⁷⁶ This might also be seen as an additional area for inquiry in anti-inversion tax legislation.

International Reforms

57. **Exempt future earnings of controlled foreign corporations from U.S. taxation, but impose a minimum tax on income booked in low-tax jurisdictions.** In theory, shifting from a worldwide to a territorial system augments incentives to strip earnings. However, cutting the CIT rate and replacing the current “toothless” quasi-territorial system with a territorial system bolstered by a minimum tax “with teeth” should reduce those incentives. As noted above, excluding foreign dividends from U.S. taxation could actually increase revenues by disallowing foreign dividend tax credits, the excess of which are often used to offset U.S. taxes on other active foreign income including royalties. Domestic expenses that support foreign investment should be fully allocated to those activities and thus excluded from domestic deduction; if this can be done effectively, then 100 percent of foreign dividends can be excluded, as under the Obama plan.⁷⁷ If full allocation is not administratively feasible, then inclusion of a small percentage of foreign earnings (e.g., 5 percent) could be required, as is the practice in several countries.

58. **Structure the minimum tax as a 15 percent country-by-country rent tax with foreign tax credits.** Because repealing the repatriation tax widens the tax rate differential between domestic and foreign earnings, a strong minimum tax is necessary to limit the scope of profit-shifting under a territorial regime. Under this regime, foreign earnings not subject to at least a 15 percent foreign effective tax rate would be subject to the minimum tax. A full FTC would be granted, but any excess credits would be limited to other income generated within the same jurisdiction. Under the current system, pooling of tax credits across countries and types of income allows MNEs to shelter low-taxed income with FTCs generated in high-tax jurisdictions.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/190280/atl_credit_response111212.pdf

⁷⁶ For more detail, see Milone et al. (2013) and JCT (2010).

⁷⁷ According to Treasury officials, the Obama plan chose 100 percent dividend exclusion (with full allocation) over a 95 percent exclusion because it simplified tax credit issues and conserved revenue.

To limit this type of arbitrage, the minimum tax should be imposed on a country-by-country basis, with no pooling of FTCs across jurisdictions. Designing the minimum tax as a rent tax—a feature of both the Camp and Obama plans—would focus it on economic rents reported in low-tax jurisdictions;⁷⁸ in particular, it would counteract the gravitation of income from highly mobile intangibles to those jurisdictions. Structuring the minimum tax as an ACC or ACE thus seems quite appropriate and could form a bridge to introducing a capital allowance into the general corporate tax, as recommended in the fundamental reform option.

59. Tax the existing stock of unrepatriated earnings at 25 percent, payable over 8 years, with a pro-rata foreign tax credit. FTCs could be utilized with a haircut proportional to the ratio of the applicable tax rate to the current 35 percent CIT rate. Insofar as this tax would apply to an existing stock of assets, it would be efficient in the sense that it would not affect future investment behavior. Given this efficiency and the tax benefit already conveyed by deferral, there seems little argument to tax the stock of unrepatriated earnings at less than the statutory rate. In theory, the tax rate applied to these earnings should be the one under which they were accumulated, but given the forced acceleration of repatriation application of the lower reformed rate appears reasonable. The Camp plan proposed distinguishing between earnings reinvested in business assets and those held in liquid form, imposing a lower rate on the former.⁷⁹ However, most liquidity concerns would be addressed by the multi-year payment period, and differentiating on the basis of reinvestment—even if applied retrospectively—would invite gaming and create arbitrary winners and losers.

60. Tighten interest deduction rules for both U.S. and foreign-owned MNEs. In line with the recommendations of BEPS Action 4, the Section 163(j) ceiling on allowable interest deductions incurred on related foreign shareholder indebtedness should be reduced from 50 percent to 10-20 percent of earnings before interest and depreciation (EBIT). To reduce domestic debt bias, this rule should also be applied to domestic as well as international firms. As recommended by the Obama plan, U.S. deductions for interest expense allocated to foreign source income should be disallowed.

61. Develop exchange of information to combat use of cross-border hybrids. BEPS Action 2 requires coordination among jurisdictions to ensure symmetrical treatment of cross-border transactions. For example, a tax administration should deny a deduction for a payment that it knows will not be included in income (or will be re-deducted) in its destination jurisdiction; alternatively, the destination jurisdiction should require inclusion of that payment in

⁷⁸ The Obama plan gives a general allowance for corporate equity, while the Camp plan gives an allowance only for tangible capital.

⁷⁹ Camp proposed rates of 3.5 and 8.75 percent and 3.5 percent on active and passive assets, respectively, while Obama proposed a flat 14 percent rate.

taxable income.⁸⁰ Implementing BEPS Action 2 would be a more precise means of addressing the hybrid problem than repealing check-the-box: Although CTB facilitates some forms of hybrids, its repeal would not prevent them, but it would greatly complicate the tax classification of businesses, the simplification of which was its original purpose.

62. **Revise the definition of corporate residence and tighten the inversion rules.** Although adopting territoriality should alleviate inversion incentives, implementation of a strong minimum tax will maintain a vestigial incentive to invert. This report supports the WH&T (2016) proposals to target inversion transactions by (1) revising the definition of corporate residence to depend on the residence of the majority of investors, and (2) lowering the threshold for triggering current law's anti-inversion rules, which are based on the percentage ownership of the new inverted entity held by U.S. owners of the pre-inversion U.S. company, to 50 percent.

Revenue Impact

63. **Estimates of the revenue impact of above-cited reform measures based on various Treasury and JCT accounts are shown in Table 3.** Base-broadening measures assume that they are applied to both corporate and pass-through entities. These estimates cannot be simply added to arrive at a net cost, due to interactions among the measures: For example, cutting the statutory CIT rate reduces the revenue raised by eliminating tax expenditures. Also, none of the tax expenditure estimates take into account likely behavioral adjustments to the new business tax regime: for example, many pass-through entities are likely to incorporate to benefit from the CIT rate cut.

⁸⁰ This may also require revision of treaty language, which the OECD is addressing in its development of a multilateral instrument.

Table 3. Revenue Estimates for Selected Tax Reform Measures

Measure	Revenue
<i>US\$ billions</i>	
Cut statutory CIT rate to 25 percent 1/	-680
International reforms	
Adopt territoriality 1/	-212
15 percent minimum rent tax*	235
Repatriation tax at 25 percent*	348
Tighten thin capitalization rules	72
Expand certain business incentives	
R&D tax credit simplification and expansion	-35
Investment expensing for small businesses	-32
Simplified accounting for small businesses	-26

Source: JCT (2016), covering 2017-2026, except: 1/ JCT (2014) covering 2014-2023.

**Estimate adjusted for IMF-proposed tax rates.*

64. **Eliminating some of the tax expenditures in Table 2 and adopting the reform measures in Table 3 suggests that revenue-neutral business tax reform is a feasible goal.** Given the U.S.' heavy reliance on distortive direct taxes, the mission does not consider it a priority for U.S. business tax reform to raise additional revenues. The goal of business tax reform should be to greatly reduce distortions from the current regime. To the extent that additional revenues are needed to address longer-term revenue needs, the U.S. should develop more efficient taxes, such as a VAT and/or carbon tax.

65. **The incremental reform outlined in this section may serve as a stepping stone toward the worldwide ACC recommended in the preceding section.** It may appear strange to describe a reform that shifts from a worldwide to a territorial regime as a stepping stone to an ultimate worldwide regime; however, cutting the statutory rate and implementing a strong minimum tax would actually narrow the disparity between the tax treatment of domestic and foreign income relative to the current high-rate, quasi-territorial regime. The capital allowance given under the minimum tax could also be extended to domestic companies to transform the CIT into a rent tax. Under worldwide consolidation, the domestic and foreign statutory rates would be unified and foreign losses would be allowed to offset U.S. domestic income. The sustainable statutory rate for a worldwide system without deferral would depend upon the generosity of the capital allowance as well as the level of foreign CIT rates.

V. EMPIRICAL INVESTIGATION OF THE INCREMENTAL REFORM

66. **This analysis considers the impact of the proposed incremental reform (see preceding section) on the tax bases of other countries.** Key elements of the reform are a lower U.S. statutory tax rate of 25 percent, combined with base broadening measures and a (per-country) minimum tax on foreign income of 15 percent.⁸¹ As a first pass, this analysis assumes no reaction on the part of foreign countries (i.e., they do not lower their CIT rates in response to the U.S. rate cut); incorporating strategic reactions is left for further study. Analysis will focus on the effects of these changes on the operations of U.S. multinational firms, using survey data from the U.S. Bureau of Economic Analysis. Findings indicate that most countries with tax rates above the minimum tax threshold of 15 percent will gain tax base at the expense of low-tax countries. Effects on the location of multinational employment and investment are likely to be far smaller.

Data and Methodology

67. **The U.S. Bureau of Economic Analysis (BEA) performs annual surveys of U.S. based MNEs and their affiliated firms abroad.** U.S. MNEs are required to complete BEA surveys, but results are not used for either tax or financial reporting purposes, and data are confidential.⁸² The BEA public dataset used in this analysis aggregates this data at the country level. The analysis employs a panel of data for the period 1983 to 2012, and each year typically includes 50-60 country observations, depending on the variable. Table 4 provides summary statistics for essential variables.

Table 4: Summary Statistics (1983-2012)⁸³

Variable	Mean	St.Dev.	No. Obs.
<i>US\$ millions except as noted</i>			
Effective Tax Rate (percent)	24.7	15.3	1,459
Gross Income	6,430	16,100	1,626
Direct Investment Earnings	2,950	6,590	1,686
Employment (thousands)	117	217	1,827
Plant, Property and Equipment	8,670	19,000	1,830
Sales	40,300	81,900	1,826

Source: Bureau of Economic Affairs

⁸¹ Although Section IV calls for a 15 percent minimum rent tax, for simplicity this section models the minimum tax as a 15 percent income tax.

⁸² The OECD (2015b) BEPS final report on Action 11 highlights these data as an example of best practices in data collection for analyzing base erosion and profit shifting. For a detailed review of the literature on profit shifting, see Clausing (2016).

⁸³ Direct investment earnings data are not strictly comparable to gross income data since there are several differences in the series, including the fact that earnings are post-tax and adjusted for the U.S. ownership percentage.

68. **The BEA data confirm that the current distribution of U.S. MNE foreign income is highly skewed toward jurisdictions with very low effective tax rates (Table 1, page 1).** Some 58 percent of foreign gross income is booked in jurisdictions with tax rates below 5 percent, and another 17 percent in jurisdictions with tax rates below 15 percent. These jurisdictions, henceforth referred to as “minimum-tax countries” are therefore most likely to be impacted by the hypothetical reform, as their tax rate differential will change not only due to the lower U.S. statutory rate, but to the imposition of the 15 percent minimum tax as well.

69. **The BEA gross income series shown in Table 1, which includes “income from equity investments”, double-counts some income where there are tiers of ownership.** Unfortunately, with existing data, it is not possible to account for this double-counting accurately. One can, however, use an alternative data series on direct investment earnings, also from the Bureau of Economic Analysis, which excludes income from equity investments (Table 5). While eliminating the possibility of double counting, this series is also incomplete, since some income is excluded. Also, direct investment earning data are pro-rated by the ownership share of U.S. parents, and the data are after-tax.⁸⁴ It is clear from Table 5 that the overall distribution of profits/earnings for these two series is very similar.

Table 5: Effective Tax Rates and Direct Investment Earnings Distribution

Effective Tax Rate Range	Number of Countries	Total Share of MNE Direct Investment Earnings
Less than 5%	9	58.2%
5-15%	8	18.5%
15-25%	12	10.7%
25-35%	12	6.2%
Over 35%	9	6.4%

Source: BEA data for 2012. Effective tax rate is defined as foreign income taxes paid divided by gross income (net income with foreign taxes added back). Shares are relative to the total direct investment earnings that are identified by country; unidentified countries are not included in the total.

⁸⁴ There are a number of other differences between the two series aside from the issue related to double-counting. These include treatment of capital gains for majority and minority owned affiliates, adjustments for parent ownership percentages, treatment of parents net interest receipts, and treatment of withholding taxes. The series differ in the total amounts of foreign earnings they report. For 2012, for example, the gross income series indicates \$1.22 trillion in foreign profits, while the direct investment earnings series reports \$0.92 trillion in profits. (This number has been adjusted to be in comparable terms as the gross income series, by reversing the BEA’s adjustment of the data by the U.S. parent equity ownership percentage and by adding back foreign taxes. The foreign tax data, however, may not be perfectly matched to the underlying earnings.) The earnings series may understate the size of the foreign income due to some omitted income, but the gross income series may overstate the size of foreign income due to some double-counting. In 2012, the adjusted earnings series is about 75 percent the size of the gross income series. Since BEA does not measure each of the differences between the two series, it is not possible to tell how much of the total difference is related to the double-counting issue.

70. **To determine the effects of U.S. tax law changes on foreign countries, the first step is to assess the tax sensitivity of profits and activity.** This is done with a regression analysis using various specifications and controls. Tables 6 and 7 show the determinants of gross income in foreign affiliates.⁸⁵ Table 7 specifications also include country fixed effects to address the possibility that other unobserved country-specific factors that are important for profitability, such as business-friendly policies, may be correlated with corporate tax rates. However, such specifications estimate tax sensitivity based only on *within* country variation in tax rates over time, not utilizing *between* country variation in tax rates. Control variables in both tables include country-level factors that measure GDP, GDP per-capita, distance from the United States, and the extent of affiliate operations as measured by plant, property, and equipment and employment.

⁸⁵ These results are quite similar to those attained by using the alternative BEA data series on direct investment earnings. See Tables 10 and 11, columns 5 and 6.

Table 6: Regressions Estimating Gross Profits, 1983-2012, Pooled Regressions

	(1)	(2)	(3)	(4)
Effective Tax Rate	-2.709*	-3.252*	-3.496*	-2.980*
	(0.274)	(0.263)	(0.152)	(0.152)
ln(GDP)		0.294*		0.0288*
		(0.0149)		(0.0102)
ln(GDP Per-capita)		0.162*		0.123*
		(0.0162)		(0.00962)
ln(distance)		-0.0246		0.0223
		(0.0451)		(0.0260)
ln(PPE)			1.093*	1.000*
			(0.0286)	(0.0277)
ln(employ)			-0.318*	-0.215*
			(0.0298)	(0.0299)
<i>N</i>	1457	1438	1452	1433
<i>R</i> ²	0.06	0.31	0.73	0.77

* $p < 0.05$. Standard errors in parentheses. PPE stands for plant, property and equipment. Column (2) is the same as column (5) in Table 11.

Table 7: Regressions Estimating Gross Profits, 1983-2012, Fixed Effects

	(1)	(2)	(3)	(4)
Effective Tax Rate	-4.613*	-1.929*	-2.530*	-1.848*
	(0.237)	(0.170)	(0.166)	(0.154)
ln(GDP)		2.091*		0.777*
		(0.167)		(0.168)
ln(GDP Per-capita)		-0.666*		0.146
		(0.205)		(0.191)
ln(PPE)			0.608*	0.373*
			(0.0308)	(0.0322)
ln(employ)			0.556*	0.299*
			(0.0478)	(0.0461)
<i>N</i>	1457	1438	1452	1433
<i>R</i> ² (Within)	0.21	0.66	0.65	0.72

* $p < 0.05$. Standard errors in parentheses. PPE stands for plant, property and equipment. Column (2) is the same as column (5) in Table 12.

71. **The estimates of Tables 6 and 7 indicate large, negative, and statistically significant relationship between gross profits and effective tax rates.** The semi-elasticities range from -1.85 to -4.61, with an average estimate of -2.92: A one percentage point increase in tax rates is associated with almost 3 percent lower profits. While this is a high degree of responsiveness, it is important to note that tax responsiveness may be even higher at low tax rates, as indicated by Dowd, Landefeld, and Moore (2014). Estimated elasticities are quite similar if one instead uses data on the BEA direct investment earnings series. This average is in line with much of the prior literature on tax base elasticities, and it is similar to those found in the meta-analyses of de Mooij and Ederveen (2003, 2008) and de Mooij (2005).⁸⁶

72. **This study next considers the effects of the incremental U.S. tax reform.** The reform is modeled as changing the tax rate difference between the United States and the foreign country as follows:

- In the case of countries with tax rates above the minimum rate, the tax rate difference (the U.S. rate minus the foreign rate) is assumed to decrease by 5 percentage points. There is a 10 percentage point decrease in the U.S. statutory tax rate, but this is offset somewhat by base broadening provisions (such as changes in depreciation rules and the repeal of the production income deduction).⁸⁷
- In the case of countries with tax rates below the minimum tax of 15 percent, the tax rate difference decreases for two reasons: due to the declining U.S. rate and also due to the increasing foreign rate. The foreign rate is assumed to become 15 percent whenever it falls below the 15 percent benchmark. For simplicity, a 15 percent income tax (rather than the rent tax described in the preceding section) is assumed.

These changes in tax rate differences, together with the elasticities estimated in the regression analysis, are used to determine how the distribution of profits would change after the tax reform. The *direct* effect is estimated as the change in the tax rate differential multiplied by the semi-elasticity of -2.92, applied to the original level of profits in each country.

73. **There are also *indirect* effects of these tax changes, and some assumptions are required to estimate how profits would be booked in the counterfactual.** It is assumed that reduced profits in countries that trigger the minimum tax would be distributed according to the share of the affiliate sales that are directed toward the U.S. parent relative to other foreign

⁸⁶ For a more detailed discussion of the estimated tax elasticities, see Clausing (2016).

⁸⁷ JCT (2011) estimates that eliminating essentially all corporate tax expenditures would finance a 7-point reduction in the statutory tax rate, indicating that a 10-point rate cut together with significant base-broadening would reduce the effective tax rate by 3-4 percentage points. Since the incremental reform proposal also includes expansion of the R&D tax credit, the analysis assumes a 5 percentage point change in the average MNE's tax rate due to the combined effects of the proposed reforms.

affiliates. Then, of the share that is directed to other foreign affiliates, a counterfactual share of profits is assigned to the non-minimum tax countries based on their share of total foreign affiliate activity, specifically: a weighted average of their sales (50 percent), employment (25 percent) and employee compensation (25 percent). This is an admittedly arbitrary way to allocate profits, but other allocation formulas yield similar results.

74. Due to issues of data availability, the analysis focuses solely on the activities of U.S.-headquartered MNEs, ignoring any effects on foreign-headquartered multinational firms.⁸⁸

It should also be emphasized that these estimates represent the steady-state effects of the new tax policy. It would likely take some time for multinational firms to respond to these incentives, and decisions regarding the location of future investment and income are likely to be more responsive to the tax reform than changes to the booking location of income from investments made prior to the reform.

Results

Effects On Foreign Tax Bases

75. At present, the foreign income of U.S.-headquartered multinational firms is very skewed toward the lowest-tax countries. Of the gross income with identified locations, 75-77 percent of gross income is booked in countries with effective tax rates of less than 15 percent in 2012/2013, the last years for which data are available.⁸⁹ In the same years, about 57 percent of gross income is booked in just seven haven destinations.⁹⁰

76. The direct effect of lowering the U.S. statutory CIT rate, combined with imposing the 15 percent minimum tax, bilaterally lowers U.S. MNE income booked in every foreign country. With respect to every partner country (all of whose policies are assumed to remain unchanged), U.S. rates are now assumed to be 5 percent lower than they were previously, and for minimum tax countries foreign rates will be higher as well. This direct effect unambiguously increases the U.S. tax base relative to that of other countries.

77. However, for most non-minimum tax countries, the indirect effect of reallocating foreign income out of minimum-tax countries outweighs the direct effect of tax base loss to the U.S. The narrowing of tax rate differences due to the incremental reform creates the largest changes in the income booked in the minimum-tax countries. This also has the indirect effect of increasing the tax base of many non-minimum tax foreign countries (i.e., those with effective tax

⁸⁸ The BEA data cover the worldwide activities of US-headquartered MNEs, but only the U.S. activities of foreign-headquartered MNEs.

⁸⁹ Data for 2013 are preliminary. 2012 is the last year with revised data.

⁹⁰ Like the elasticities estimated in Tables 4 and 5, both of these patterns are quite similar if one instead uses an alternative series on direct investment earnings.

rates over 15 percent), which counters the direct bilateral effect of losing tax base to the U.S. Since the vast majority of foreign income is booked in the lowest-tax countries, this indirect effect would dominate for most countries.

78. Focusing on the four most recent years, the amount of foreign income booked by U.S. MNEs in non-minimum tax countries increases by an average of 33 percent (Table 8). Both non-OECD and OECD countries show similar increases, although OECD countries do slightly better on average. While there are a wide range of gains, almost all non-minimum tax countries gain tax base from U.S. MNE affiliate income, and the few such countries that lose U.S. foreign affiliate tax base lose very small shares of their original base. However, all minimum tax rate countries lose tax base. The countries with the largest changes are shown in Table 9, ranked both in terms of their change as a share of profits booked by U.S. foreign affiliates (columns 1 and 3) and in absolute dollar terms (columns 2 and 4).

Table 8: Tax Base Gains for Non-Minimum Tax Countries

Year	Total Reported Income in Foreign Affiliates (US\$ bn.)	Direct Estimated Change in Foreign Affiliate Income (US\$ bn.)	Indirect Estimated Change in Foreign Affiliate Income (US\$ bn.)	Total Estimated Change in Income (US\$ bn.)	Percent Change in Income (percent)
2010					
All Non-Min Countries	225.6	-32.9	116.1	83.2	36.9
Non-Min, Non-OECD	118.7	-17.3	54.8	37.4	31.5
Non-Min, OECD	106.8	-15.6	61.3	45.7	42.8
2011					
All Non-Min Countries	370.0	-54.0	150.8	96.9	26.2
Non-Min, Non-OECD	143.9	-21.0	60.1	39.1	27.2
Non-Min, OECD	226.1	-33.0	90.8	57.8	25.6
2012					
All Non-Min Countries	264.9	-38.6	126.0	87.3	33.0
Non-Min, Non-OECD	133.8	-19.5	63.5	43.9	32.8
Non-Min, OECD	131.1	-18.3	59.8	41.4	31.6
2013					
All Non-Min Countries	240.7	-35.1	123.5	88.4	36.7
Non-Min, Non-OECD	134.2	-19.6	66.4	46.8	34.9
Non-Min, OECD	106.4	-14.6	54.4	39.8	37.4
Average: 2010-13					
All Non-Min Countries	275.3	-40.2	129.1	89.0	33.2
Non-Min, Non-OECD	132.7	-19.4	61.2	41.8	31.6
Non-Min, OECD	142.6	-20.4	66.6	46.2	34.4

Note: All numbers are in current U.S. dollars. 2013 data from the U.S. Bureau of Economic Analysis are preliminary. Estimates are for foreign affiliates of U.S. multinational firms only. The number of countries in these groups is not constant across years, as countries' effective tax rates sometimes are just above of below the 15 cutoff, causing them to move into or out of these groups. (This issue affects the numbers for 2011 in particular.)

Table 9: Top 10 Ranking of Countries with Largest US Foreign Affiliate Income Gains and Losses (2010-2013 Average)

Largest Income Gains		Largest Income Losses	
Share of US Affiliate Tax Base	US\$	Share of US Affiliate Tax Base	US\$
<i>All > 45%</i>	<i>All > \$4b/year</i>	<i>All > 30%</i>	<i>All > \$4b/year</i>
Greece	Germany	Bermuda	Netherlands
India	China	Luxembourg	Ireland
Italy	France	Cayman Islands	Luxembourg
France	Mexico	Barbados	Bermuda
Germany	Japan	Ireland	Switzerland
South Africa	Brazil	Netherlands	Cayman Islands
Honduras	Greece	Singapore	Canada
Philippines	India	Switzerland	Singapore
Ecuador	Australia	Austria	United Kingdom
Brazil	Italy	Hong Kong	Hong Kong

Source: BEA and Author's calculations. Countries in bold are in top 10 of both affiliate tax base share and US\$ rankings.

Effects on Foreign Real Activity

79. **Regression analysis indicates that real economic activity is far less sensitive than financial measures to tax rate differences across countries.** Tables 10 and 11 show a comparison of different activity measures, Table 11 models include country fixed effects. In both tables, there is no statistically significant relationship between country tax rates and employment or plant, property, and equipment investments. However, tax responses for total assets, gross income and investment are large and statistically significant. Sales show tax-sensitivity only in the models without country fixed effects.

Table 10: Regressions Explaining Activity Levels, 1983-2012, Pooled Regressions

	(1) ln(empl.)	(2) ln(sales)	(3) ln(PPE)	(4) ln(assets)	(5) ln (gross income)	(6) ln (direct investment earnings)
Effective Tax Rate	0.0374 (0.237)	-1.412* (0.246)	-0.264 (0.255)	-3.337* (0.277)	-3.252* (0.263)	-3.313* (0.253)
ln(GDP)	0.309* (0.0133)	0.326* (0.0138)	0.325* (0.0143)	0.319* (0.0155)	0.294* (0.0149)	0.231* (0.0142)
ln(GDP Per-capita)	-0.0600* (0.0146)	0.112* (0.0151)	0.0247 (0.0157)	0.201* (0.0170)	0.162* (0.0162)	0.122* (0.0158)
ln(distance)	-0.0195 (0.0406)	-0.00219 (0.0422)	-0.0497 (0.0438)	-0.0510 (0.0475)	-0.0246 (0.0451)	-0.180* (0.0449)
<i>N</i>	1436	1439	1439	1439	1438	1370
<i>R</i> ²	0.31	0.30	0.27	0.33	0.31	0.29

* $p < 0.05$. Standard errors in parentheses. PPE stands for plant, property, and equipment. Gross income is net income plus foreign taxes paid.

Table 11: Regressions Explaining Activity Levels, 1983-2012, Fixed Effects

	(1) ln(empl.)	(2) ln(sales)	(3) ln(PPE)	(4) ln(assets)	(5) ln (gross income)	(6) ln (direct investment earnings)
Effective Tax Rate	-0.181 (0.102)	-0.0292 (0.102)	0.0119 (0.147)	-1.505* (0.168)	-1.929* (0.170)	-1.833* (0.175)
ln(GDP)	1.053* (0.100)	2.393* (0.100)	2.682* (0.143)	3.237* (0.163)	2.091* (0.167)	1.278* (0.170)
ln(GDP Per-capita)	-0.416* (0.123)	-1.302* (0.123)	-1.833* (0.176)	-1.787* (0.201)	-0.666* (0.205)	-0.0422 (0.208)
<i>N</i>	1436	1439	1439	1439	1438	1370
<i>R</i> ² (Within)	0.48	0.76	0.57	0.72	0.66	0.57

* $p < 0.05$. Standard errors in parentheses. PPE stands for plant, property, and equipment. Gross income is net income plus foreign taxes paid.

80. **In light of the low response of real factors like employment and plant/equipment to tax rate differences, spillover effects on jobs or investment for other countries are likely to be far smaller than the tax base effects estimated above.** This finding is compatible with a long literature in public finance that suggests a hierarchy of behavioral responses: Real economic decisions concerning employment or real investment are far less responsive to taxation than are financial or accounting decisions. Saez, Slemrod and Giertz (2012), Slemrod and Bakija (2008) and Auerbach and Slemrod (1997) summarize this literature. For U.S. multinational firms, this same pattern is clearly shown in the data analyzed in Tables 10 and 11. There is no doubt that disproportionate amounts of income as compared to investment, sales, or employment are booked in low-tax countries.

81. **Due to the large size of the U.S. market and the substantial scale of U.S. foreign direct investment, U.S. tax reform is likely to have noticeable effects on other foreign countries.** This analysis has modeled the impact of a proposed incremental reform that includes a lower U.S. statutory tax rate of 25 percent, base broadening measures, and a per-country minimum tax on foreign income of 15 percent. For countries with tax rates above the minimum tax threshold of 15 percent, estimates indicate an approximately one-third increase in the size of their U.S. foreign affiliate tax base, whereas low-tax countries affected by the minimum tax should receive substantially lower U.S. foreign affiliate profits. Effects on the location of multinational employment and investment are likely to be far smaller due to the far lower tax elasticities of real economic activity.

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