Major Surgery Needed: A Call for Structural Reform of the U.S. Corporate Income Tax

Eric Toder* and Alan D. Viard**

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* Institute Fellow, Urban Institute, and Co-Director, Urban-Brookings Tax Policy Center, 202-261-5577, etoder@urban.org.

** Resident Scholar, American Enterprise Institute, 202-419-5202, aviard@aei.org.

Introduction

It is widely recognized that the current U.S. corporate income tax is flawed, particularly in its treatment of foreign-source income. These flaws are amplified by the high U.S. statutory tax rate. Unfortunately, current reform proposals fail to resolve the fundamental contradictions in the current corporate income tax structure.

The current system and the reform proposals attempt to base corporate taxation on the source of the corporate income, the residence of the corporation, or a combination of those two factors. The problem is that neither source nor corporate residence can be easily defined. Any viable reform must either find an agreed-upon way to define those terms or must restructure the tax system in a way that avoids the need to define them.

In this report, we describe the challenges facing the corporate income tax and discuss two structural reform options that could address them. One option would seek international agreement on how to allocate income of multinational corporations among countries. The other option would eliminate the corporate income tax, but would tax American shareholders of publicly traded companies at ordinary income tax rates on their dividends and accrued capital gains. We discuss the benefits and limitations of each option.

Background – The Current U.S. Corporate Income Tax

Why Tax Corporate Income?

Commentators often raise the question – why tax corporate profits at all? After all, corporations are not really people; they are merely institutions through which people conduct their business affairs. Economists point out that all taxes must ultimately fall on people in the form of a reduction in their ability to purchase private goods and services, either today or in the future. Taxes on corporations must ultimately be borne by individuals, although it is unclear how the burden is divided among corporate shareholders, other recipients of investment income, employees, or consumers of corporate-sector goods and services. Because people ultimately pay all taxes, why not assess all taxes directly on individuals based on their ability to pay?

In a textbook version of a neutral income tax system[1], there would be no separate corporate income tax. All business profits would be allocated to owners of businesses, who would include them in

[1] A neutral income tax system features no distortions about how savings are allocated between different uses. Even a neutral income tax, however, is biased in favor of current consumption relative to saving for future consumption. Some economists, including Alan Viard, prefer a progressive consumption tax over an income tax because it is also neutral between current and future consumption, while others, including Eric Toder, cite practical problems of implementing a progressive consumption tax and instead favor maintaining taxes on income from capital. In this report, we assume that the current income tax is retained and consider how to reform the corporate income tax in that context.

their income subject to individual income tax. In a progressive income tax system with graduated tax rates, profits of higher-income owners would face a higher tax rate than profits of low-income owners, but the rate would not depend on the form of income received. In fact, this "flow-through" method is how sole proprietorships, partnerships, limited liability companies (LLCs), and S corporations, are taxed today. The corporate income tax does not apply to them. Instead, the owners of these firms are taxed on their profits as they are earned. To ensure that the profits are only taxed once, the owners pay no further tax when the profits are paid out to them. Moreover, an owner who sells his or her ownership stake in the business can deduct his or her share of the business's reinvested profits as part of their cost of the investment. Flow-through enterprises comprise most of U.S. businesses and today account for the majority of revenue and profits generated in the business sector.

But there are severe practical problems with applying the flow-through method to large publicly-traded corporations. When corporate shares are traded frequently and often held for short periods of time, allocating corporate profits among shareholders is a complex and daunting task. For example, if an individual holds 100 shares of GM stock from January 23, 2014 to May 12, 2014, how much of GM's annual income should be allocated to the individual? In order for shareholders to know how much income to report to the IRS in 2014, GM would need to report to each shareholder her allocated portion of GM's profits based on both the percentage of total shares she held and the length of time she held them.

If corporate profits can't be assigned to individual owners, one alternative would be to tax the owners on the profits that are distributed to them as dividends plus the change in value of their holdings of stock during the year. After all, the reinvestment of profits not paid out as dividends should add to the value of the corporation and show up as capital gain. Under longstanding principles of our tax system, however, capital gains are not taxed until they are realized through the sale of the stock. Furthermore, if the stockholder dies before selling the stock, the gain that accrued during the stockholder's lifetime is never taxed to anyone; the stockholder's heirs are treated as having acquired the shares at their value on the date of the stockholder's death and face tax only on any gains above that value. One of the two structural reform options that we consider in this report would rethink this principle and tax accrued gains annually at the shareholder level. But as long as we retain the tax system's reliance on the realization principle, stockholders can avoid paying individual tax on corporate profits until the corporation pays a dividend or the shareholder cashes in her share of past retained earnings by selling her shares and realizing a capital gain. Delaying a tax effectively reduces it, because a dollar paid tomorrow is worth less than a dollar paid today.

An important rationale for the current tax on corporate profits, therefore, is that it prevents retained earnings of shareholders from escaping the individual income tax. But a tax on profits of U.S. corporations has some limitations as a proxy for immediate taxation of retained earnings. First, because the tax rate paid by the corporation cannot be varied among the corporation's stockholders, individual shareholders in low tax brackets are over-taxed and shareholders in high tax brackets may be under-taxed if the top individual rate is higher than the top corporate rate. Second, the failure to allow corporations to deduct dividend payments (discussed below) imposes a second level of tax and can result in the over-taxation of corporate dividends compared with business income in flow-through businesses. Third, Americans may still avoid or defer U.S. tax on income retained within corporations by buying shares in foreign-based corporations that are outside the jurisdiction of the U.S. income tax. And fourth, as discussed below, some U.S.-based corporations can avoid the corporate profits tax by shifting reported profits to low-tax foreign countries.

In addition to its role as a backstop for the individual income tax, the corporate income tax may enable the United States to raise revenue from foreign investors in U.S. corporations and in foreign corporations with U.S.-source income, thereby lowering the burden on American taxpayers. To be sure, taxing foreign investors can reduce U.S. output and real wages by increasing the cost of attracting foreign capital to the United States. But to the extent that the United States has unique advantages as an investment location, the corporate tax may extract some economic rents from foreign investors.[2]

By taxing corporate retained earnings on which individual tax would be delayed or avoided, the current corporate income tax serves a very important function as a backstop for the individual income tax. It is important to keep this basic purpose in mind as we consider how to reform corporate taxation. Unfortunately, under the existing rules, the corporate tax does not always serve that backstop function effectively and also imposes major distortions on business decisions.

We now provide an overview of the current U.S. business tax system. In Appendix A, we briefly sketch the recent history of U.S. business income taxation.

Current U.S. Business Income Taxation – General Rules

The U.S. federal tax code includes a separate tax on corporate income at graduated rates ranging from 15 percent for corporations with low income to 35 percent at the top.[3] Most corporate income is taxed at the 35 percent rate. In 2013, forty-five states and the District of Columbia also imposed corporate profits taxes at maximum rates ranging from 4 to 12 percent and averaging about 6.3 percent. State taxes are deductible in computing federal taxable income. As a result, the average combined federal-state rate on corporate profits in 2013 across all 50 states and DC is about 39.1 percent. There is also a

[2] Two less convincing arguments seek to justify the corporate income tax as a charge for the privilege of limited liability or as a user charge for public services, such as police protection, a legal system, public education of workers, and roads and other infrastructure provided to corporation. On the first point, the limited liability justification has little relevance today when many businesses with limited liability are not subject to the corporate income tax. On the second point, the amount of income tax a corporation pays may bear no relationship to the value of services it receives and flow-through businesses, which also receive public services, are exempt from the corporate income tax. Moreover, many of these services are provided by state and local governments rather than the federal government. Local taxes on tangible business property are better user charges for public services to businesses.

[3] There is no sound rationale for the graduated corporate tax rates. They do nothing to address the corporate tax's failure, discussed above, to link the tax rate to the stockholder's income level, as the smallest corporations may actually be owned by the highest income individuals. Instead the current preferred rates serve as a subsidy to some small businesses that are organized as taxable corporations.

corporate alternative minimum tax, which features a 20 percent tax rate, but allows fewer deductions and tax credits than the regular income tax; in each year, a corporation must pay the higher of the regular tax or the alternative minimum tax in each year.

The base of the tax is net corporate profits, which equals taxable receipts less deductible expenses. Deductible expenses include wages, interest payments to creditors, cost of goods sold (for the costs of buying or producing goods sold out of inventory), depreciation of capital equipment and structures, depletion of mineral reserves, and taxes paid to state and local governments. As a result, most income generated within the corporate sector is taxable directly to income recipients, such as employees and lenders, under the individual income tax and is not included in the corporate tax base.

However, dividends received by shareholders and capital gains attributable to retained profits of corporations are taxable at both the individual and corporate level. Corporations cannot deduct dividends paid to shareholders and shareholders are taxed on them. Similarly, shareholders must pay tax on the difference between the sales and purchase price of shares with no deduction for the reinvested profits that were subject to corporate income tax. The double taxation is mitigated to some extent, however, because long-term capital gains and dividends are taxed at reduced rates ranging from 0 to 23.8 percent, including the 3.8 percent surtax imposed on the net investment income of high-income taxpayers. Combining the corporate and individual level taxes, dividends can be taxed at rates of up to 50.5 percent.[4]

Corporations with losses do not receive refunds on their current year tax return. But they may “carry back” the loss to the two prior years by filing amended returns for those years, deducting the loss against those years’ profits, and obtaining refunds of the taxes paid in those years. Losses in excess of the profits in the two prior years may be carried forward for up to 20 years and deducted against profits in future years, reducing tax payments in those years.

Traditionally, a major advantage of organizing a business as a corporation, potentially offsetting the disadvantage of paying corporate income tax, was that shareholders were not personally responsible for debt incurred by the business, as their liability was limited to the amounts that they had invested in the business. In contrast, partnerships and sole proprietorships did not offer limited liability, leaving the owners fully liable for any debts the businesses incurred, but they had the advantage of being flow-through businesses that were exempt from corporate income tax. As explained above, S corporations and partnerships do not pay corporate income tax. Instead, their income is allocated to owners or partners who pay one level of tax at individual income tax rates. Most sole proprietorships also do not pay corporate income tax.

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[4] On $100 of corporate income, the corporation pays $35 tax, if none of the provisions (discussed below) that reduce the effective tax rate below the statutory tax rate are applicable. If the remaining $65 is paid out as dividends to a shareholder who faces a 23.8 percent tax rate, the shareholder pays another $15.47 of tax, for a total tax burden of $50.47.

Historically, the combination of limited liability and flow-through tax treatment was available only to small corporations organized under subchapter S of Chapter 1 of the Internal Revenue Code (S corporations). S corporations were subject to the same basic flow-through rules as partnerships and sole proprietorships, but faced more severe restrictions on the number and kind of owners that they could have. They were also restricted to having only a single class of stock, while partnerships were allowed to have multiple classes of partners, who could split up the profits in many different ways.

Today, it is much easier for investors to enjoy both limited liability and flow-through tax treatment. The limitations on the number and kind of S corporation shareholders have been relaxed over the last 25 years. Also, states have created a new business entity called the limited liability company (LLC). In 1996, Treasury adopted "check-the box" regulations that made it simple for most LLCs to choose to be taxed as partnerships (or, if owned by a single member, to be disregarded for tax purposes) and thereby receive flow-through treatment.

Most businesses in the United States today are taxed on a flow-through basis and these businesses accounted for 56 percent of taxable business profits in 2008. But, except for publicly-traded partnerships which are largely in the oil and gas and real estate sectors and more recently, private equity, large publicly-traded businesses with many owners are ineligible to be organized as flow-through businesses and must be subject to the corporate income tax.

Although the United States has a higher top corporate tax rate than the other OECD countries, U.S. corporate tax revenue as a percentage of GDP has been lower than the GDP-weighted average for the remainder of the OECD in almost every year since 1979 (**Chart 1**). In part, this may reflect a somewhat larger use of corporate tax preferences in the United States than elsewhere. But a more important factor is the large and growing role of flow-through businesses in the United States. It's possible that total revenue from the taxation of business profits, including the individual income taxes imposed on the profits of flow-through businesses, may have increased as a share of GDP in the United States in the last three decades and may be higher than the average for the rest of the OECD.

A useful measure of the true tax burden on a new investment is the marginal effective tax rate, which measures the fraction of the before-tax return that ends up being paid in taxes or the percentage by which the tax reduces the pretax return. The marginal effective tax rate can be lower than the statutory tax rate, due to exemptions, special deductions, tax credits, and provisions that delay the recognition of income. Appendix B discusses the effect of depreciation policy on the marginal effective tax rate.

Taxation of International Income – General Rules

The U.S. corporate income tax is imposed on all profits from activities of permanent establishments of corporations in the United States, whether the corporations are U.S.-based or foreign-based. In addition, U.S.-resident corporations are taxable on their world-wide income, albeit with major exceptions that are discussed below. In principle, therefore, the U.S. taxes corporate profits if either the *source* of the profits or the *residence* of the corporation is in the United States.

In practice, however, the U.S. tax is closer to a source-based tax than to a worldwide residence-based tax. As explained below, two major provisions – deferral and the foreign tax credit – lower the tax burden on the foreign-source income of U.S. corporations.

Most U.S. and foreign-based multinational corporations conduct business activities overseas, including production and marketing, through separate corporate entities chartered in foreign countries ("foreign subsidiaries"). The foreign subsidiaries, or Controlled Foreign Corporations (CFCs), are treated legally as separate entities and pay corporate income tax to the country in which they are located. Most profits earned by CFCs of U.S.-resident corporations are exempt from U.S. corporate income tax until they are repatriated in the form of dividends paid to the U.S. parent company, which then pays tax on them. This provision, known as "deferral", allows a significant share of active foreign profits of U.S.-based corporations to escape immediate U.S. corporate tax. Most other countries have an exemption system, under which they exempt most active foreign profits of the subsidiaries of their resident multinationals from their corporate income taxes, rather than merely deferring the tax as the United States does.

Although deferral generally applies to active business profits, it does not apply to all of a CFC's income. Under the Subpart F rules,[5] U.S. parent companies must pay tax on some kinds of income earned by a CFC at the time it is earned rather than deferring tax until the income is repatriated as dividends. The Subpart F rules apply to passive income, such as interest income, and other income that can be easily shifted between countries. The rules are intended to prevent corporations from shifting passive income overseas to take advantage of deferral. For similar reasons, those countries that exempt subsidiaries' active business profits from tax also have provisions similar to the U.S. Subpart F rules that deny the exemption to the subsidiaries' passive income.

To avoid double taxation of cross-border income that has been taxed by another country, the U.S. also allows U.S.-resident corporations to claim a credit for foreign income taxes associated with repatriated profits. For example, if a CFC in country X with a 25 percent corporate tax rate pays a $75 dividend to its U.S. parent company, the parent company reports a gross dividend of $100 on its corporate tax return and is liable for $35 of U.S. corporate income tax (at the 35 percent U.S. rate) less a $25 credit for foreign taxes, for a net U.S. tax of $10. With a foreign tax credit system, therefore, the corporation pays taxes to both governments on its foreign-source income that add up to the U.S. tax rate, instead of paying a single tax at the foreign tax rate as they would under an exemption system.

The foreign tax credit is limited to the U.S. tax on the parent's foreign-source income. For example, if the CFC was subject to a 40 percent tax rate abroad and paid a $60 dividend to its U.S. parent company, the parent would report a gross dividend of $100 and would be liable for $35 of U.S.

[5] The rules are set forth in Subpart F of Part II of Subchapter N of Chapter 1 of the Internal Revenue Code.

corporate income tax less a $35 credit, for zero net U.S. tax. Although the CFC paid $40 in taxes, only $35 can be credited, because that is the amount of the U.S. tax on the dividends. The goal is keep companies from using the foreign tax credit to reduce their other U.S. tax liability when their CFCs' profits are remitted to the United States and to limit the ability of foreign countries to impose taxes on inbound investment by U.S. corporations that are then fully reimbursed by the U.S. Treasury. However, U.S. corporations can avoid the effects of the foreign tax credit limitation by averaging repatriations from low-tax countries with repatriations from higher tax countries. For example, if the U.S. parent receives both the $75 dividend from the 25-percent-tax-rate country and the $60 dividend from the 40-percent-tax-rate-country in the same year and reports $200 of gross dividends, it can claim credit for the full $65 in foreign tax payments, because that is less than the $70 of U.S. tax imposed on the foreign profits used to pay the dividends. In any event, the foreign tax credit limitation applies to fewer corporations than in earlier years because foreign effective tax rates are now mostly lower than U.S. effective tax rates and because some companies, especially those in the high-tech and pharmaceuticals sectors, have been able to shift profits to low-tax jurisdictions.

The application of corporate income taxes to the profits of multinational corporations depends on how countries define the *residence* of a corporation and the *source* of corporate income. The United States defines a U.S.-resident corporation as a company that has its principal place of incorporation in the United States. Some other countries define residence based on where a company conducts the major portions of its "headquarters" activities, such as central management, finance, and research.

The United States follows the general practices recommended by the Organisation for Economic Co-operation and Development (OECD) and the UN of treating the subsidiaries of its resident multinationals as separate corporate entities. The division of profits among these entities determines which country has the right to impose its *sourced-based* corporate income tax on the profits. This division of profits depends on a number of factors, including rules for allocating joint costs of the entire corporate group, such as interest expenses, general management expenses, and R&D costs, among the separate entities and rules for valuing "transfer prices" for goods and services traded within the corporate group.

The OECD and UN have developed an "arms-length" standard that corporate groups should set transfer prices for income tax purposes based on comparable sales between related entities. These methods are sometimes supplemented by approaches that set prices to generate a normal (sometimes risk-adjusted) rate of return to capital investment in particular locations. But relevant comparable prices typically do not exist for intangible assets that multinationals license to their CFCs, a serious limitation because intangible assets are the main source of profits for the most profitable multinationals in today's world. For example, how can one find a comparable price for the royalty on a patent, when a patent (by definition) applies to a unique invention and has not been marketed to an independent third party? Current rules also allow considerable scope for corporations to shift the *source* of their intangible profits, often to locations with low tax rates and very little real economic activity, while claiming a disproportionate share of deductions for overhead expenses and interest costs that benefit the entire corporate group in their home country or other high-tax locations.

It is widely recognized that the U.S. corporate income tax faces a number of challenges, which have been aggravated by the increased globalization of the U.S. economy.

Challenges Facing the Corporate Income Tax

General Concerns About the Corporate Income Tax

Even before considering international implications, the corporate income tax is a problematic tax, because it features multiple distortions that serve little coherent policy purpose.

First, corporations are penalized relative to flow-through businesses, which are exempt from corporate income tax, as discussed above. Plesko and Toder (2013) analyze the trends in choice of organization of business activity since TRA86, finding that organizational decisions have responded to differences in the tax treatment of businesses subject to corporate tax and flow-through businesses.

Second, equity-financed corporate investment is penalized relative to debt-financed corporate investment. As discussed above, interest payments are deductible, but dividend payments are nondeductible and reinvested corporate profits are not treated as part of the shareholders' costs when they sell their stock. Statistical studies indicate that the corporate income tax has increased corporations' use of debt. De Mooij (2011) provides a meta-analysis of 19 studies that reported 267 estimates of tax sensitivity of debt, including both cross-firm and cross-country studies. The "consensus" estimate implies that corporate income tax causes sizable increases in debt.

Third, payout decisions are distorted because dividends are taxed as they are received, but capital gains are not taxed until the gains are realized. As a result, the tax system penalizes corporations that pay dividends while issuing new equity, relative to those that reinvest corporate earnings. Chetty and Saez (2005) and others have found statistical evidence that dividend payments are sensitive to the tax treatment of dividends.

International Concerns About the Corporate Income Tax

The corporate income tax faces even greater challenges in an open economy. Moreover, those challenges have become more severe in recent years.

In discussing which tax system the United States should adopt, some commentators, following the lead of Musgrave (1969), have considered how they affect the wellbeing of the entire world population. Other commentators, including Graetz (2001, 277-82), Viard (2013, 564), and Shaviro (2014, 108-9) argue that U.S. tax policy should be evaluated based on whether it promotes the wellbeing of Americans. We will consider both criteria in our discussion below. The current U.S. tax system is ill suited to achieving either of these objectives.

We first discuss the challenges that face a pure residence-based corporate tax and then those that face a pure source-based tax. We then turn to the challenges that face the current U.S. system, which is a hybrid of the two systems.

Open-Economy Issues for Pure Residence-Based Tax

Under a residence-based corporate income tax, U.S.-resident multinationals would be immediately taxable on their worldwide income, including the income earned by their controlled subsidiaries in foreign countries (CFCs), although they might continue to receive a credit for foreign income tax payments. The U.S. corporate income tax falls short of full residence-based taxation because, as discussed above, it allows multinational companies (MNCs) that are resident in the United States to defer tax on active business income retained by their CFCs.

If the United States adopted a pure residence system by eliminating deferral, while retaining the foreign tax credit, U.S. corporations would, for the most part, pay the same combined U.S. and foreign taxes on investments at home and investments overseas, including investments in both low-tax and high-tax countries.[6] That outcome would result in "capital export neutrality" for U.S. corporations, meaning that the combined foreign and domestic tax systems would be neutral among those corporations' investments at different locations. The pure residence system would also eliminate the incentive for U.S. MNCs to shift reported income to low-tax countries. If all of a CFC's income was subject to immediate U.S. income taxation, there would be no benefit from shifting income to a tax haven.

Capital export neutrality can promote world-wide efficiency in the allocation of capital among nations and can thereby promote worldwide wellbeing. If all countries' tax systems were consistent with capital export neutrality, then there would be no tax incentive for any company to change the location of its investment. A U.S. company would face the same tax rate regardless of where it invested, as would a U.K. company, although the tax rate for U.S. companies in all locations might be different from the tax rate for U.K. companies. Each company would increase its investments in countries with high before-tax returns, driving those returns downward, and reduce its investments in countries with lower returns, driving those returns upward, until before-tax returns were equal across countries, which is one condition for worldwide efficiency.

Worldwide efficiency would not be achieved, however, if the United States alone adopted a pure residence system while other countries remained on their current source-based system. MNCs in countries that use source-based taxation would direct their investments to low-tax countries. By doing so, they would drive down the before-tax return in low-tax countries and raise the pre-tax return in high-tax countries, restoring the misallocation of capital among countries that the U.S. residence-based system would have attempted to prevent. Instead of leading to an efficient allocation of worldwide capital, the U.S.'s unilateral enactment of a pure residence tax would simply create a competitive

[6] The one exception is that a U.S. corporation with investments in countries with tax rates higher than the U.S. tax rate could pay the higher foreign rate, because the foreign tax credit is limited to the U.S. tax on the foreign income, as discussed above.

disadvantage for investments by U.S. MNCs in low-tax countries. They would receive a reduced pretax return due to the inflow of capital from other countries' MNCs and then, on top of that, would have to pay U.S. corporate income tax on the reduced return.

An alternative form of residence-based system would maximize the return to the United States, net of foreign income taxes, from investments by U.S. MNCs. Under this version, U.S. MNCs would pay tax on their world-wide income, but would claim only a deduction, not a credit, for foreign income taxes paid. This rule would encourage U.S. MNCs to allocate their investments across countries to maximize the net return to U.S. residents by setting the pre-tax return on investments in the United States equal to the portion of the return on overseas investments that go to Americans (the pre-tax return minus foreign taxes). This outcome, called national neutrality, is efficient from a national perspective, assuming no policy responses from other countries, because foreign income taxes, unlike taxes collected by the U.S. Treasury, do not benefit the United States. In contrast, worldwide efficiency is maximized by equalizing the pretax return to investments everywhere. From a worldwide efficiency viewpoint, a residence system with a deduction would encourage U.S. MNCs to overinvest in the United States and in low-tax foreign countries and to under-invest in high-tax foreign countries.

Under more realistic conditions, however, either type of residence-based system may fail to promote both worldwide and American wellbeing. As further discussed below, it is far from clear that a dollar invested by a U.S. MNC abroad displaces a dollar of investment at home. Suppose, instead, that a dollar invested by a U.S. MNC abroad causes a dollar of additional investment by a foreign MNC at home, with no change in the total amounts invested at home and abroad. In that case, worldwide taxation of U.S. MNCs may place them at a competitive disadvantage compared with foreign-based MNCs without increasing investment in the United States. American wellbeing may instead be maximized by a source-based system that exempts the return on the investment abroad.

The shortcoming of the pure residence system is that it would place U.S.-resident MNCs at a competitive disadvantage. As a result, the system is likely to cause investments by foreign-resident MNCs to replace investments by U.S.-resident MNCs, through several channels.

As discussed above, a corporation is treated as having a U.S. residence if it is incorporated in the United States. Under this definition, a company can avoid being a U.S. resident (and thereby escape U.S. corporate income tax on its foreign profits) simply by being legally incorporated in another country, even if it has the same allocations of its workforce, tangible capital, sales, R&D facilities, and management and control activities across countries as another company legally incorporated in the United States.

To be sure, most U.S.-resident MNCs would not immediately change their residence to a foreign country if taxes on their foreign-source income were increased; certainly, it is hard to imagine that the leading U.S. high-tech firms are about to leave Silicon Valley. Directly changing the residence of an entire existing company requires that it undergo an "inversion" transaction, which could trigger substantial exit taxes on the corporation's built-in gains and might run afoul of other tax provisions to prevent inversions, as described by Hayes (2013). Some experts, including Kleinbard (2011), believe that the problem of corporations leaving the United States is manageable through a combination of stronger anti-inversion rules and a lower U.S. corporate tax rate and that a worldwide residence-based corporate income tax can work even if applied unilaterally by the United States.

Over time, though, inversions are not the only way that world output and profits can shift away from U.S-resident corporations. U.S. corporations can contract out production to foreign-resident firms, instead of owning the firms directly as CFCs. Residence can be shifted through joint ventures or buyouts of, or by, foreign-based firms, as in the example reported by Gelles (2013). Increased worldwide taxation could cause new corporations to be incorporated outside of the United States, although Allen and Morse (2013) provide evidence this is not happening today. Finally, to the extent that higher corporate taxes can't be passed on to shareholders in a global market for equity funding, the resulting increase in relative costs may raise prices and reduce the worldwide share of output and sales of U.S.-based MNCs. Shaviro (2014, 34-36) discusses the increasing ability of corporations to manipulate their residence for tax purposes.

To avoid the problems raised by this residence definition, we could follow the countries that define a corporation's residence to be the country in which it has its central place of management. Top management personnel in U.S. MNCs might resist moving to a more tax-favorable jurisdiction, such as Ireland or Singapore, merely for their companies to avoid U.S. taxes based on corporate residence. But, that's not a fully satisfactory solution. Although it may be somewhat harder for a company to change its central place of management than to change its country of incorporation, it can still be done, particularly given the decentralization of headquarters functions of many large MNCs documented by Desai (2009).

Indeed, it is hard to imagine any definition of corporate residence that could not, in the long run, be manipulated by corporations. Given the high stakes involved, the skills of private sector tax advisors, and the challenges in formulating a robust and meaningful definition of corporate residence, we find it doubtful that a residence-based system can be sustained in the long run.

The limitations of the pure residence-based tax suggest consideration of a pure source-based tax. Yet, that option also proves to have serious limitations.

Open-Economy Issues for Pure Source-Based Tax

A source-based or territorial tax would impose tax on all corporate income earned within the United States, but would not tax active foreign-source income of U.S.-based MNCs.

The main advantage of a source-based tax system is that it does not discriminate among companies on the basis of residence. If all countries adopted source-based taxation, then each company would face the same relative tax treatment across different potential investment locations. This feature is called "capital ownership neutrality" by Desai and Hines (2004) in recognition of the fact that it is neutral with respect to the residence of the parent MNC. In some circumstances, this can promote an efficient deployment of the investment by U.S. MNCs.[7]

If the United States enacted a pure source-based system, the tax law would not place U.S.-based MNCs at a competitive disadvantage or discourage firms from establishing or maintaining corporate residence in the United States. This may produce broader benefits to Americans if corporate residence carries with it other attributes, such as a higher level of domestic R&D activity, more investment and employment in the United States, or higher returns for U.S. resident shareholders.[8]

But, as with a residence system, enactment of a pure source-based system would also create some problems. First, source-based taxation will encourage U.S. MNCs to invest more in low-tax foreign countries, where they will earn lower before-tax returns than in the United States and other high-tax foreign jurisdictions. This incentive runs counter to the goal of worldwide efficiency, which requires that before-tax returns be equal everywhere.

The impact of source-based taxation on American wellbeing is also unclear. If real investment abroad by U.S. MNCs comes at the expense of investment at home, then source-based taxation causes a migration of capital and jobs from the United States. This concern may be overstated for several reasons, as explained by Toder (2009). First, a shift of U.S. MNC investment overseas might drive down marginal returns in low-tax foreign jurisdictions and raise marginal returns in the United States, leading to an offsetting flow of investment to the United States from foreign-based MNCs, as pointed out by Desai and Hines (2004). Second, foreign investment may facilitate exports, so that more U.S. investment overseas may lead to more production for export in the United States, as noted by Desai, Foley, and Hines (2009), who estimated that a 10 percent increase in direct foreign investment would raise domestic investment by 2.6 percent and domestic employee compensation by 3.7 percent.[9] Third, any capital outflows from the United States would weaken the U.S. dollar in international currency markets, which could lead to an offsetting increase in U.S. employment. Due to these factors, an extra dollar of investment abroad probably does not cause a full dollar of investment at home to be lost. If no domestic

[7] Suppose all other countries have source-based systems and that relative pre-tax returns among countries vary with differences in corporate income tax rates on investments in each country. Suppose also that U.S. rules for taxing the foreign-source income of its MNCs do not affect relative pre-tax returns among countries because they do not significantly affect the total amount of capital invested in each country. In that case, the United States cannot achieve capital export neutrality by taxing the worldwide income of its MNCs. Also, suppose that the total output produced by the amount of capital in each country in response to differences in corporate income tax rates depends on who owns the capital, because some companies are more efficient than others in making particular investments. Then, efficient deployment of U.S. capital requires capital ownership neutrality, so that the tax system does not distort the selection of which company owns the capital in each country.

[8] These claimed benefits are not necessarily associated, however, with the corporation being incorporated in the United States. If a U.S. corporation shifts its place of incorporation overseas, it might continue to conduct the same types of central management and R&D functions in the United States that it does as a U.S.-resident corporation. Also, U.S. resident corporations are not necessarily owned by shareholders who are U.S.-resident individuals.

[9] A number of studies explore the relationship between foreign investment and exports, with mixed results. These studies include Feldstein (1995), Devereux and Freeman (1995), Desai, Foley, and Hines (2005a), and Bloningen (2001).

investment at all is lost, then source-based taxation maximizes American wellbeing. But, if there is some loss of domestic investment, then pure source-based taxation does not maximize American well-being.

Beyond this, there is a much more daunting set of problems. Like the residence of a corporation, the source of income is hard to define. As a result, it is easy for taxpayers to manipulate a tax base defined by source of income.

- MNCs have discretion in how they allocate fixed costs among separate corporate entities and in how they structure their financing. By allocating more costs to domestic production, they can reduce reported domestic profits and raise reported foreign profits. By engaging in debt-equity swaps in which the U.S. parent incurs debt to purchase equity in a subsidiary in a tax haven, which then lends money back to the U.S. parent, they can incur interest costs that are deductible in the United States and earn interest income that is tax-exempt in the tax haven.
- MNCs with intangible assets have the greatest opportunities to shift income because the source of intangible income cannot be meaningfully defined; intangible assets, such as patents, knowhow, and brand name recognition, benefit the entire corporate group. By assigning ownership of intangible assets to a subsidiary in a low-tax country, an MNC can allocate the extra-normal profits resulting from the intangible assets to the low-tax country, while investments in production facilities in the United States and other high-tax countries are assigned only a normal rate of return. Transfer pricing rules fail to capture adequately the value of transfers of intangible ownership, partly because there are no comparable transactions that can be used to establish an arms-length price and partly because the transfer of "ownership" may occur before it is known how profitable the new product or process will be.
- Further shifting of income from low-tax jurisdictions to tax-free locations, such as Bermuda and the Cayman Islands, can sometimes be accomplished by additional techniques that exploit features of double taxation agreements and take advantage of weak CFC rules in other jurisdictions. [10]

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[10] Kleinbard (2011) provides a detailed description of the "Double Irish/Dutch Sandwich" technique that Google and other high-tech companies have used to shift profits from their intangibles to tax havens. The first step is straightforward: Google, before going public, licenses its search engine and other technologies to an Irish sub at a price reflecting an estimate of their value that is way below what they became worth after Google went public. This step alone enables Google to shift a large part of its profits to the Irish sub that owns the intangible assets, where the profits are taxed at a 12.5 percent corporate rate, even though little of the value added in the development of the intangible occurred in Ireland. Then, through a series of other steps, Google is able to get much of the income shifted to Bermuda, which has no corporate income tax. This involves the use of multiple subsidiaries in different jurisdictions and exploitation of numerous anomalies in international tax provisions, including differences in the definition of corporate residence between the United States and Ireland, the exemption under Irish law from withholding taxes on royalty payments from Irish subs to EU member states, the exemption under Dutch law of outbound withholding taxes on royalties paid by Dutch companies, and the ability under the U.S. "check-the-box" rules for U.S. companies to characterize certain subsidiaries as "disregarded entities" whose income is not captured by U.S. Subpart F rules. Kleinbard concludes that "the end result is a near-zero rate of tax on income derived from customers in Europe, the Middle East, and Africa that is attributable to the high-value intangibles that encompass the bulk of Google's factors of production and a very low rate of tax attributable to the services of Google's Irish-based sales force." The term "Double Irish/Dutch sandwich" reflects the fact that the technique relies on the interposition of a Dutch-resident subsidiary between a higher-tier and

- Income shifting through these techniques can erode the domestic tax base by redefining taxable income from domestic production as tax-free income originating in tax havens. The source of reported income can end up having no connection with the location of real economic activity.

A hybrid system probably makes more sense than a pure source-based or residence-based system within the context of current institutions. Because both residence and source bases can easily be shifted in response to taxes, a hybrid system that provides some distortion of each decision is likely to be better than a pure system that maximizes one distortion while avoiding the other. But, hybrid systems manage, rather than avoid, the tradeoffs posed by the two pure systems. And, hybrids can even introduce additional distortions, if they are not well designed, as is true for the hybrid system used in the United States.

Open-Economy Issues for Current U.S. Hybrid Tax System

As discussed above, the U.S. corporate tax attempts to impose a residence-based tax on the overseas earnings of U.S. MNCs. But, thanks to deferral and the foreign tax credit, the United States actually imposes little residual tax on foreign profits of U.S. MNCs, making the U.S. tax system close to a source-based system.

Because the U.S. tax system is a hybrid between residence-based and source-based systems, it shares some of the disadvantages of each of the pure systems. On the one hand, the fact that the U.S. imposes some residual tax on the foreign profits of U.S. MNCs, and in that respect has a residence-based system, gives rise to complaints that U.S. MNCs are at a disadvantage relative to MNCs based in countries that use pure source-based tax systems. On the other hand, the fact that tax is deferred on foreign profits, which moves the tax system towards a source-based system, is perceived to shift employment overseas and to encourage "runaway plants" (overseas production facilities by US MNCs that then import the output back to the United States.) For the reasons stated above, though, it is not clear that source-based taxation actually causes an aggregate loss in U.S. jobs. But it may cause employment by some MNCs to shift overseas to the extent that it is easier to shift income generated from overseas production to tax havens than it is to shift income from U.S. production. (Kleinbard, 2011).

Beyond these real economic effects, the current system allows pure avoidance through income shifting. Recent press reports, including Drucker (2012), Gleckman (2013), and Kocieniewski (2011) describe how major US multinationals, including Apple, Google, and General Electric, have been able to shift reported income to tax havens and avoid U.S. corporate income tax and Bergin (2012) reports on how Starbucks has shifted income out of the United Kingdom (see also Kleinbard, 2013). Grubert (2012) has documented that the foreign profits of U.S. multinationals have grown in recent years far out of proportion to growth in their real economic activity abroad. The ability to shift income overseas is not

lower-tier Irish subsidiary. (Google recently testified in United Kingdom hearings, however, that it no longer uses a Dutch company as an intermediary, possibly because Ireland has become more lenient in its taxation of intangible income.)

the same for all large corporations, leading to complaints about an uneven playing field. Corporations with intangible assets, such as IT companies, pharmaceutical companies, and companies with high brand identification, can more effectively deploy profit-shifting techniques than corporations in traditional manufacturing and retailing.

Another concern relates to the specific manner in which the current system reduces the tax on overseas earnings, namely the deferral of tax until the CFC pays dividends to the parent. U.S. corporations complain that the "repatriation tax" on dividends paid back by their CFCs keeps capital "locked out" of the United States, preventing them from either reinvesting in the United States or paying dividends to their shareholders. According to Rubin (2013), U.S. MNCs have accumulated about $2 trillion of assets in their foreign affiliates. However, because some of the money is deposited in U.S. banks and companies can borrow against these funds, it is unlikely that the repatriation tax significantly limits the U.S. parent company's investment in the United States[11] or curtails its ability to pay dividends to its shareholders. But, the lock out does raise the risks and transactions costs that U.S. MNCs must incur to get more funds to shareholders through dividends and share buyouts.

U.S. financial accounting rules also encourage MNCs to keep foreign profits abroad. Under most circumstances, public corporations have to report an accrued tax liability on their income statement, even if they have not paid the tax. The tax that will be payable on income accrued in CFCs upon repatriation is an example of such a liability. Current accounting rules, however, allow corporations to avoid reporting their liability for the tax that will be payable upon repatriation of the income accrued in CFCs if they state that the funds are "permanently invested" overseas.

Some readers' reaction to the lock out problem may be: "So what?" After all, corporations accumulated much of this overseas cash by shifting reported income to tax havens to avoid paying U.S. income tax. Complaining that they must then pay tax when they bring the money back may make them look like the man who murdered his parents and then pleaded for mercy on the grounds that he was an orphan. Economists view the matter differently. A tax that raises very little revenue while imposing significant costs on taxpayers (albeit less than the costs of paying the tax) is an inefficient way to raise money. Grubert and Altshuler (2013) and Desai, Foley, and Hines (2001) estimate that the repatriation tax imposes a substantial burden on U.S. MNCs while raising little revenue.

Concluding Comments

The previous discussion has shown that both pure models of taxing profits of multinational corporations – a residence-based corporate profits tax and a source-based corporate profits tax – are seriously flawed, as are hybrids that combine their characteristics. The common problem shared by both systems is the difficulty of defining the tax base (either corporate residence or source of corporate income) and the ease with which the tax base can be shifted to low-tax foreign jurisdictions. This suggests that a real solution to the problems caused by today's corporate income tax won't be solved by unilateral efforts

[11] Two recent studies, Dharmapala, Foley, and Forbes (2011) and Brennan (2013), found that the large inflow of dividends prompted by a temporary dividend repatriation holiday enacted in 2004 had little or no effect on investment in the United States.

by the United States government to tweak the system in the direction of either a source-based or residence-based tax, although some second-order benefits can be gained by plugging specific loopholes and reforming the method by which we tax foreign-source income. A real solution would require either better international coordination of rules to share the corporate tax base among jurisdictions or a shift in tax from the corporate to the individual taxpayer level, where a residence concept is easier to apply.

Proposed Reforms and Why They Fall Short

Many of the reforms being considered in the current debate may yield incremental improvements over the current tax system, but they do not address the fundamental problems outlined above. The most serious reform plan, discussed below, is the one recently introduced by House Ways and Means Committee Chairman Dave Camp (R-Michigan).

General Issues

Most of the recent reform plans are modeled after the corporate tax provisions of the Tax Reform Act of 1986, using base broadening to finance a reduction in the corporate statutory tax rate, generally to somewhere in the range of 25 to 30 percent. Some of these 1986-style plans address both corporate and individual income taxes, while others would reduce only the corporate tax rate. Examples include the Simplified Income Tax plan presented by the President's Bipartisan Commission on Tax Reform in November 2005, the Simpson-Bowles deficit reduction plan put forward in December 2010, President Obama's fiscal 2015 budget plan, the plan introduced in November 2013 by Senate Finance Committee chairman Max Baucus (D-Montana), the plan proposed by Senators Ron Wyden (D-Oregon) and Dan Coats (R-Indiana), and the plan introduced by chairman Camp.

The plans vary greatly in their degree of detail. The proposals of the reform commissions were very sweeping in their scope, but were not endorsed by either the George W. Bush or Obama Administrations or by Congressional tax writing committees. The Wyden-Coats proposal (and the Wyden-Gregg proposal that preceded it) is also quite sweeping, but it remains to be seen whether Senator Wyden as the new Finance Committee chair will attempt to implement it. Former Senate Finance Committee chairman Baucus proposed specific reforms in discussion drafts, but did not advance a fully formulated plan that would pay for a lower corporate tax rate. President Obama is reasonably specific in his fiscal year 2015 budget, but his proposed base-broadening provisions, net of the new tax breaks he proposed, would finance only a modest reduction in the corporate tax rate.[12]

Representative Camp's proposal, introduced on February 26, 2014, would reduce the top corporate rate to 25 percent and the top statutory individual rate to 35 percent. It would also eliminate

[12] The president's plan provides a $238 billion reserve for long-run-revenue-neutral business tax reform in fiscal years 2014 through 2024. Because the corporate income tax is slated to raise $5.5 trillion at a 35 percent rate during that eleven-year period, the reserve would appear to finance a reduction of only one or two percentage points in the tax rate. (The precise rate reduction would depend on behavioral responses, divergences between short-run and long-run revenue effects, and other factors.) The Administration has considered other potential reforms that might finance a lower corporate rate, including limiting corporate interest deductions and taxing large flow-through businesses as corporations, but has not officially endorsed these options.

the individual and corporate alternative minimum taxes. It would pay for the rate reduction and AMT repeal by eliminating a number of corporate tax preferences, including accelerated depreciation and expensing of research expenditures, eliminating or scaling back many individual income tax preferences, and requiring taxpayers in the top bracket to claim most itemized deductions and some other tax breaks at a 25, rather than 35, percent rate. He would retain the 3.8 percent surtax on investment income that was enacted in the Affordable Care Act and allow taxpayers to claim an exemption of 40 percent of capital gains and qualified dividends, making the top rate on gains and dividends equal to 24.8 percent (60 percent of 35 percent plus the 3.8 percent surtax). He would also phase out a number of deductions, including the standard deduction, as income rises, making the effective tax rates in the phase-out ranges higher than the statutory rate.

Most of these plans rely heavily on the elimination of accelerated depreciation, which is the largest available source of revenue to finance corporate rate reduction. Unfortunately, the economic gains from lowering tax rates by slowing down depreciation are likely to be modest and may not even be positive. Investment incentives are unlikely to be improved, because the depreciation slowdown raises taxes on investments even as the rate reduction lowers them. Indeed, these kinds of reforms can easily lower taxes on existing capital and raise taxes on new investment. The largest potential gain of the reforms is that they may narrow disparities in effective tax rates across different types of investment, but, as Viard (2009) notes, some of the reform proposals would widen rather than narrow those disparities. Also, slowing depreciation schedules raises more money in the short run than in the long run, as explained by Gravelle (2011); if the tax rate is lowered by enough to keep revenue in the next decade unchanged, thereby allowing the reform to be scored as revenue-neutral under standard budget rules, then the reform inevitably loses revenue in the long run.

In general, the 1986-style approach does not address the main source of corporate tax avoidance, which is the exploitation of the international rules. Reducing rates and broadening the base in a deficit-neutral way can be beneficial if it's done in a sensible manner. Among other things, it would reduce the incentive to shift reported profits to countries with lower tax rates. But, the economic benefits of trading off a lower rate for higher effective tax rates on the return to new investments in machinery, equipment, and research are likely to be modest.

Open-Economy Reforms

Many of the reform plans have international provisions. Some of them, such as the 2005 tax reform panel's plan and the Camp plan, move towards source-based taxation. Others, like the Wyden-Coats plan, which repeals deferral, move towards residence-based taxation. But, they cannot escape the fundamental deficiencies of the two tax systems. It is also not clear that dramatic movements in either direction are politically feasible.

The international plans offered by Representative Camp and former Senator Baucus are similar in that both would restructure our current hybrid system of taxing foreign income by eliminating most or all of the tax on repatriations, while increasing taxation of accrued foreign income and tightening provisions to prevent income shifting. The Camp proposal would move towards a territorial tax system by allowing U.S. multinationals to claim a deduction of 95 percent of dividends they receive from their foreign affiliates, reducing the tax rate on repatriated income to 1.25 percent. To limit income shifting by U.S. corporations, Camp would impose a minimum tax of 15 percent on accrued intangible income of CFCs (25 percent on profits from sales in the United States), where intangible income is defined as profits in excess of a 10 percent rate of return on capital assets. Camp would also impose a transitional tax, payable over an 8-year period, on past CFC earnings that had not been repatriated, with a tax rate of 8.75 percent on earnings held abroad in liquid assets and 3.5 percent on earnings reinvested in the CFC's business operations.

Former Senator Baucus' proposal would eliminate the tax on repatriations; overseas income would be taxed immediately when the CFC earned it or not at all. But he would increase current taxation of income earned within CFCs. He would expand Subpart F income to include all active income of CFCs from producing goods and services overseas that are sold in the U.S. market. The proposal outlines two options for taxing CFCs' income from products and services sold in foreign markets. Under Option Y, if the foreign country taxed the income at less than 80 percent of the U.S. corporate tax rate, then 80 percent of the income would be subject to immediate U.S. tax, with a credit for the foreign taxes, and the other 20 percent would be exempt from U.S. tax.[13] If the foreign country taxed the income at more than 80 percent of the U.S. rate, then it would be exempt from U.S. tax. Under Option Z, if the income was derived from economically significant activities, 60 percent of the income would be subject to immediate U.S. tax, with credit for 60 percent of the foreign taxes, and the other 40 percent would be exempt from U.S. tax. If the income was not derived from economically significant activities, all of it would be subject to immediate U.S. tax, with a credit for foreign income taxes. Both options also include additional provisions to limit base erosion. Baucus also proposes that past CFC earnings that had not yet been repatriated would be subject to a one-time 20 percent tax, payable over an eight-year period.

Both plans would largely eliminate one distortion of the current hybrid system, the repatriation tax discussed above. Both would include tighter rules to prevent the shifting of profits abroad, although the Baucus options would tax accrued income at higher rates than the Camp options and move the United States closer to a worldwide system. In both plans, rules to prevent base erosion would be adopted on a unilateral basis by the United States, raising concerns that they might place U.S. multinationals at a disadvantage (the Baucus plan more so) if other countries do not follow suit with similar rules.

We now consider two approaches that would offer a way out of this dilemma. The first option would rely on increased cooperation among nations to strengthen the current corporate income tax system. The second would replace the U.S. corporate income tax with full inclusion in the individual income tax base of accrued income from corporate shares of U.S.-resident shareholders.

[13] If the corporate rate were reduced to 30 percent, as Baucus has discussed, option Y would result in a 24 percent tax rate on accrued income of CFCs and option Z would result in an 18 percent rate on income from "economically significant" activities.

STRUCTURAL REFORM OPTION: Expanded International Cooperation

Because, as explained above, both source and residence bases for taxing corporate income are difficult to define and enforce by a single country, one potential solution is for the major economies, with almost all of the large multinational corporations, to agree on how to divide up the corporate tax base among themselves. Countries could still apply different rates to the portion of the tax base they are assigned and maintain targeted tax preferences for selected domestic investments. Such an approach would prevent techniques that shift the source of income to tax havens, while enabling countries to maintain a large degree of control over corporate tax policy. As part of this approach, the United States would eliminate its taxation of dividend repatriations.

<u>Why International Cooperation is Necessary</u>

In principle, it is desirable for sovereign nations to choose their own fiscal policies. Citizens of different countries, with different economies, populations, and cultural values, should have the right to choose the level and composition of public spending and taxes that best satisfies their preferences and economic circumstances. If the United States population acting through their elected representatives wishes to spend less on public services than European countries, and raise a larger or smaller share of revenue from taxation of business profits, they should have the right to do so.

Nonetheless, when economic activities transcend national boundaries, each country's fiscal policies are constrained by the policies of other countries. Most large companies today are multinational, with sales, production facilities, and employment throughout the world. Capital can move easily from one jurisdiction to another in response to differences in corporate tax rules.

One dimension along which countries compete to attract capital is corporate tax rates. Over the past 25 years, almost all OECD countries except the United States have lowered their top corporate tax rate. But any single country's effort to attract investment by lowering their tax rate can be negated if others follow suit. Some observers fear a "race to the bottom" that reduces revenue while failing to attract much additional investment, especially if the world supply of saving does not increase by much in response to the lower taxes. Others believe this competition is healthy because it lowers the burdens of the distortionary corporate income tax. This option does not intend to prevent countries from choosing to lower their corporate tax rates to attract real capital investment and finance their public sector in a different way.

Instead, the option seeks to curb a far more troubling type of international competition – the competition by major capital-exporting countries to favor their resident MNCs and attract more corporations to establish residence through rules that enable their resident MNCs to shift profits to tax havens. As discussed above, corporate residence and the source of corporate income are becoming difficult concepts to define, allowing both U.S.-based and foreign-based MNCs to shift reported profits to tax havens. The United States could enact tougher rules to limit tax shifting by its resident MNCs, as proposed by the President and the chairmen of both Congressional tax-writing committees. But if other countries don't follow suit, this will hurt the competitiveness of U.S. MNCs.

International cooperation could advance global wellbeing by preventing the shifting of profits to tax havens by corporations resident in all major economies and reducing the amount of resources devoted to wasteful tax avoidance. Moreover, taking these steps on a mutually agreed upon basis should result in an increase in the national wellbeing of each participating country, including the United States.

Current Rules of the Road

U.S. international tax rules do not exist in a vacuum, but instead reflect international norms for taxing cross-border income. Starting with efforts by the League of Nations in the 1920s and continuing through efforts spearheaded by the OECD and the United Nations (UN), international bodies have developed common "rules of the road" for international tax policy. These basic rules are:

- Every country has the first right to tax profits from permanent establishments producing goods and services within their borders. In practice, this means that the United States taxes all corporate income with a U.S. source, regardless of whether the income is earned by a U.S.-resident or a foreign-resident corporation.
- To prevent discrimination against cross-border income, countries should enact rules to avoid situations in which the same income is taxed by multiple countries. Countries should either exempt foreign-source income from domestic tax or, if they tax the income, should allow a credit for foreign income taxes paid. In other words, cross-border income should face either the tax rate in the source country or the tax rate in the home country, but not a combined tax rate that is higher than both rates.
- There are no multilateral treaties that regulate corporate profits taxes in the way that the World Trade Organization regulates potential trade barriers. Instead, countries have negotiated a vast network of bilateral double taxation agreements (DTAs) that specify rates of tax on certain sources of income by the source country and methods the resident country uses to prevent double taxation of cross-border income. Both the OECD and the UN have developed "model treaties" that serve as templates for these agreements, although the specifics vary among agreements. The United States has negotiated a wide variety of DTAs with other countries.
- In determining the source of income earned by an MNC, the prices of goods and services traded within the MNC (so-called "transfer prices") should be set with reference to prices of comparable goods and services in "arms-length" transactions between independent entities. In situations where comparable transactions may not exist, such as the licensing of a unique intangible asset, companies may use various other valuation methods. The OECD, with the active participation of the United States, has established guidelines for transfer pricing methods.

As noted above, however, these transfer pricing methods are often ineffective in preventing MNCs from shifting reported income to affiliates in tax haven locations with little real economic activity occurring.

Ongoing International Efforts

Governments throughout the world are concerned about the ability of MNCs to avoid taxation in their home countries by shifting reported profits to low-tax or no-tax jurisdictions. According to a recent broadcast, BBC (2013), the "revelation of how little tax Google, Starbucks, and Amazon have been paying on their global operations has triggered political indignation around the world and thrown fresh light on the aggressive techniques multinational companies can use to slash their tax bills." In response to this publicity and a request from leaders of the G20 (2012), the OECD (2013) prepared a report outlining an action plan to address *base erosion and profit shifting* (the "BEPS report").

The BEPS report notes that globalization, including the global integration of corporations, has provided substantial benefits for member nations' economies, but has also created opportunities for multinational corporations to minimize their tax burden. According to the report, these tax-minimization activities have undermined tax systems, reduced funding for public investment, shifted more of the burden of paying for government to other taxpayers, and placed new companies and businesses that operate only in domestic markets at a competitive disadvantage. In response, the report offers a list of 15 actions that may be taken, including establishing "international coherence of corporate income taxation." Under the latter subhead, the report lists four issues that need to be addressed:

1. *Putting an end to, or neutralizing the effects of, hybrid mismatch arrangements and arbitrage*. These types of arrangements enable companies to shift reported income to low-tax countries or tax havens by changing the way income flows or corporate entities are characterized. An example is the type of income shifting that the U.S. "check-the-box" rules facilitate. These rules allow a U.S. corporation to determine whether an affiliate they own and control is either a taxable subsidiary or a foreign branch or "disregarded entity" which is not treated as a separate entity. Suppose, for example, a foreign subsidiary of a U.S. MNC engaging in active business activities in high-tax country A sets up a company in tax haven B, which is treated as a disregarded entity under U.S. law, but is treated as a country-B based corporation under country A's law. The country-A sub of the U.S. MNC injects equity into the country B-company, which then lends the money back to it. The interest payments to country B are deductible from country A's income tax, but are taxable in country B. So this transaction transfers income from the high tax foreign country (A) to the low-tax foreign country (B), where it bears no income tax. If the country-B firm were a subsidiary of a U.S. MNC, its interest income would be taxable as passive income under U.S. CFC rules. But because the country-B sub is a "disregarded entity" under U.S. tax law, its transactions with the country-A sub have no tax consequences in the United States, yielding no interest deduction for the country-A sub and no interest income for the country-B sub. The result is that the U.S. MNC has reduced its country-A tax liability, but still has active income in country A under the U.S. tax code, on which it can defer U.S. tax until the income is repatriated. While this type of transaction strips revenue directly from country A's Treasury instead of the U.S. Treasury, the ability to do this provides an incentive for U.S. MNCs to establish manufacturing subsidiaries in high-tax foreign countries, so they can avoid paying income tax anywhere.

2. *Strengthening controlled foreign corporation rules*. Under controlled foreign corporation (CFC) rules such as the U.S. Subpart F rules, the home country taxes on a current basis certain income its resident MNCs accrues in CFCs. In the previous example, even if the U.S. retained its check the box rules, it could tax some of the income of its country A sub (which has succeeded in eliminating or mostly eliminating its country A income tax) if it imposed a minimum tax on all lightly taxed income in CFCs. And if the United States were to repeal check the box (as recommended in the options proposed by former Senate Finance Chairman Max Baucus), the interest income of the country B company in the above example would be treated as Subpart F income and would be subject to current U.S. taxation.

3. *Preventing base erosion through the use of interest expenses, for example, the use of related party or third-party debt to achieve excessive interest deductions.* A key component of many tax avoidance schemes, including the above example, is the use of loans to related parties to shift the allocation of net income among taxing jurisdictions. A number of countries have enacted "thin capitalization" rules that limit the amount of interest expenses in relation to total capitalization that any affiliate in a corporate group can incur. Alternatively, countries including the United States may enact or strengthen general rules for allocating interest expenses among separate entities in a controlled corporate group.

4. *Improving transparency, including "compulsory spontaneous" exchange on rulings related to preferential regimes.* Many tax authorities are not fully aware of the various financing arrangements that their MNCs undertake to reduce tax liability and how they may be facilitated by tax policies and enforcement practices of other taxing authorities. Improved reporting requirements can facilitate compliance and shed light on new tax avoidance schemes that MNCs are developing.

The BEPS report also recommends actions in the following areas:

- Developing special rules for the allocation of profits from intangibles and rules to prevent inappropriate assignment of profits to entities that have assumed risk without supplying capital;
- Improving enforcement of the arms-length transfer pricing system:
- Preventing abuse of tax treaties;
- Improving data collection; and
- Requiring companies to disclose aggressive tax planning techniques.

But the report also endorses maintaining the arms-length principle and continuing to treat affiliates of an MNC group as separate entities, which arguably makes the problems they seek to address much harder to fix.

The OECD project is a work in progress. The BEPS report provides a comprehensive list of the important issues and problems in taxing profits of MNCs and proposes a schedule for developing recommendations on the issues they identify. But specific options remain to be developed. And the report does not provide an enforcement mechanism to ensure that members comply with any forthcoming recommendations. Developing a consensus on specific measures will be difficult given the different economic positions of various member countries, and the need also to accommodate the interests of the BRICS countries (Brazil, Russia, India, China, and South Africa). Nevertheless, all of these countries would probably agree that too large a share of MNC profits is currently reported in tax havens with little or no real economic activity.

Reforming Income Allocation Rules

The key issue is how to allocate the taxable profits of MNCs among jurisdictions. Currently, affiliates of MNCs are treated as separate entities reporting profits to the jurisdiction in which they operate. Allocation of income depends on how fixed costs (overall management expenses, interest costs, R&E costs) are allocated among the entities, where the residual profits from intangibles are located, and how transfer prices for transactions among the affiliates are set.

Reformers have suggested two alternative methods for allocating the profits of an MNC group. Both would require international agreement and both would limit or eliminate the ability of companies to shift income to their low-tax affiliates.

The first method is formulary apportionment, also called unitary taxation. Under formulary apportionment, the MNC group is treated as a single entity and its profits are allocated among jurisdictions based on a weighted average of measures of economic activity, such as property, payroll, or sales. Formulary apportionment would eliminate the current ability of companies to shift income to their low-tax affiliates through accounting transactions because income allocation would be based on real activities, such as payroll, sales, or physical assets.

Many U.S. states and Canadian provinces use formulary apportionment to compute the state or provincial share of their national corporate tax base and the European Union is considering formulary apportionment for allocating company profits among member states (Martens-Weiner, 2006).[14] U.S. states have traditionally allocated profits based on a formula that assigns equal weights to assets, payroll, and sales, although recently some have shifted to formulas with an increased weight on sales. There are different ways to implement formulary apportionment. It could be adopted by international agreement as the worldwide standard for allocating corporate profits, or failing that, the United States could adopt formulary apportionment unilaterally in the expectation that other countries would follow suit, as recommended by Avi-Yonah and Clausing (2007).

Formulary apportionment would be more difficult to implement in a worldwide context than in the domestic context because it would require agreement on how to measure worldwide corporate profits. It works well within the United States and Canada because state and provinces can use the federal tax system's measure of corporate profits as the starting point. If agreement can be reached on how to measure and allocate corporate profits, formulary apportionment would have the huge benefit

[14] Hellerstein (2013) discusses differences between the EU and US methods of allocating the corporate tax base among jurisdictions.

of ending the fiction that corporations with common ownership are independent entities. It would no longer be necessary to determine the value to an independent foreign entity of rights to use intangible assets, a determination that is largely arbitrary in the absence of comparable arms-length transactions for these rights. And corporate groups would no longer be able to shift profits among a group of legally independent but in fact commonly controlled entities in ways that reduce reported profits.

Nonetheless, formulary apportionment is not a panacea. Although formulary apportionment is probably superior to separate accounting as a way of allocating profits *within* a corporate group, it distorts the choice between transactions within a group and transactions with independent companies. A U.S. MNC can perform manufacturing or marketing activities with a foreign jurisdiction either through a CFC or by contracting with an independent company. Altshuler and Grubert (2010) note that, under formulary apportionment, an MNC can reduce its tax liability in a high-tax country by contracting out activities, along with their associated property, payroll, or sales, to independent companies. That strategy allows the MNC to escape tax on the portion of the return that comes from the use of intangible capital to support manufacturing and sales activities in the high-tax jurisdiction. Although the independent companies will pay local income tax on their profits, these profits will reflect only the return on the tangible capital they use in sales and manufacturing. Altshuler and Grubert therefore conclude that formulary apportionment has no clear advantage over separate accounting for firms with significant returns from intellectual property. Hines (2009) makes a similar argument. The question is a familiar one in economics; if you can't achieve neutrality among all possible alternatives, which forms of non-neutrality are most harmful? A longstanding argument holds that formulary apportionment is harder for taxpayers to manipulate because the high transactions costs of negotiating and enforcing rights to the returns from intangible assets (Markusen 1995) make it more costly for multinational companies to shift income through contracting out than to shift reported income within a corporate group. However, multinationals' improved contracting ability may make that argument less valid today.

A second method would maintain separate accounting generally, but use a formula to allocate profits from intangibles. This method could be supplemented with agreed upon rules for allocating interest and other fixed costs. Under this approach, profits from manufacturing and marketing subsidiaries of an MNC would be determined by assuming some risk-adjusted rate of return on assets. This would roughly replicate the profits these activities would earn if conducted by independent entities and so would be broadly consistent with an arms-length approach. Then, residual profits from intangible assets would be allocated in proportion to sales, as proposed by Graetz and Doud (2013). Proponents of this "destination-based" allocation believe it would reduce opportunities for U.S. MNCs to shift income from intangible assets to low or zero-tax jurisdictions. In that sense, it would operate similarly to value added taxes, which also are destination based. The difference would be that the base of a destination-based corporate income tax would be corporate profits only, while a value added tax is imposed on all factors of production that contribute to final sales of consumption goods, including labor and super-normal profits, but excluding the normal return to capital (Toder, Nunns, and Rosenberg, 2011).

Some analysts worry that MNCs might be able to avoid tax by booking the high profits from intangible assets through to distributors in low-tax countries, who then re-sell the goods at low-profit margins to final consumers (Altshuler and Grubert, 2010). Preventing this type of avoidance would require rules that trace the flow of goods and services to final consumers, which might be difficult to do.

These allocation rules should make it possible to dispense with trying to pin down the elusive concept of corporate residence. Like source-based systems, these rules focus on where to allocate income rather than where to locate corporate residence. Nevertheless, one of the rules, the destination-based corporate tax, deviates sharply from conventional source concepts. The destination-based tax places higher tax burdens on MNCs with a larger proportion of their sales in high tax countries. The emphasis on the location of sales is very different from conventional source measures' emphasis on the location of production or employment. Because corporations are likely to want to sell their goods throughout the world, a destination based tax will not lead to very much shifting of reported income to avoid tax. But a portion of the burden of such a tax would fall on consumers of the corporation's products throughout the world rather than on the corporate shareholders, who may be concentrated in some locations.

This second method would still lead to some real tax competition among countries because corporations could reduce their tax liability by locating jobs and physical assets in countries with lower corporate tax rates. But, if the rules for allocating intangible profits to sales could be properly enforced, this approach would not provide scope for the type of manipulation of the reported source of income that exists today.

A potentially even more attractive method would allocate the corporation's income in proportion to where its stockholders reside. We are not aware of any literature that discusses this approach and we are not sure whether it would be practical. Sanchirico (2014) documents the difficulty of compiling accurate data on the nationality of owners of U.S. multinational corporations. Such allocation would require information on the percentage of shares owned by individual residents in different countries, which would shift every day as shares are traded. It would also be necessary to trace through the complex patterns of inter-company holdings of shares to compute ultimate shareholder ownership, in order to prevent manipulation by setting up shell owners in tax havens. These problems may not be insurmountable and we recommend further efforts to examine whether and how such an allocation method could be made operational.

In conclusion, the recent effort to increase international cooperation through the BEPS project is at a very early stage. It is driven by the increased awareness in OECD member states of tax avoidance by multinational corporations at a time of increased fiscal pressure, as nations deal with the challenges of aging populations. It also reflects an increased awareness that maintaining effective taxation of the income of MNCs requires increased international coordination.

Reaching consensus among countries on reforms to limit base erosion and improved methods to allocate income among jurisdictions will be very challenging. Whatever method is used will create some economic distortions, either by distorting choices of employment or investment among locations or by distorting the choice between operating within a corporate group and contracting out functions to independent entities. Different allocation methods will have different relative effects on various countries' revenues and the after-tax profits of their parent MNCs, making it difficult to reach an international consensus.

None of this, however, refutes the main point that corporate income should not be allocated to tax haven jurisdictions with little economic activity. This type of allocation erodes the corporate tax base and subverts the choices of all governments in deciding how much to tax various income sources. Even if it is difficult to identify the best system, it should be possible to design a system for allocating corporate profits that is superior to the current one. All of the world's major economies are potential winners.

The options for increasing international cooperation build on the existing system of worldwide corporate taxation, instead of starting from scratch. They would not require complex transition rules or major changes in how individuals report or pay taxes. And they recognize that individual countries acting by themselves are unlikely to be able to develop effective reforms of the corporate income tax.

Nonetheless, it is also possible that international efforts to revive the corporate income tax will fail and the tax base will continue to erode in spite of efforts by the United States to lower rates, broaden the tax base, and bolster definitions of the source of corporate income and corporate residence on a unilateral basis. Accordingly, the other structural reform option considered in this report would abandon the corporate income tax entirely and replace it with direct taxation of the income of corporate shareholders who reside in the United States.

STRUCTURAL REFORM OPTION: Replacing Corporate Tax with Shareholder-Level Accrual-Based Tax

The idea behind this option is that a separate corporate tax is unnecessary if shareholders are fully taxed on corporate income. Under this option, the corporate tax would be repealed. American shareholders would be taxed on dividends and capital gains at ordinary income tax rates, rather than at today's preferential rates. As explained below, capital gains on corporate shares would need to be taxed on an accrual basis for this option to be fully effective.

General Advantages of Shareholder Taxation

Replacing the corporate income tax with shareholder taxation would have important advantages even if the United States was a closed economy. First, shareholder taxation would be more progressive because the tax rate would be calibrated to the stockholder's tax bracket, as Altshuler, Harris, and Toder (2010) discuss at length.

Second, eliminating the corporate income tax would remove corporate tax preferences and the complexity of the current tax. The shareholder tax would need to measure the shareholder's dividends and capital gains, not the corporation's income. Depreciation schedules, amortization rules, inventory accounting, uniform capitalization, and a host of other complexities would not need to be considered with respect to corporations. But, those complications might remain for flow-through businesses, depending on how they are taxed, and some desirable tax preferences might be eliminated, as discussed below.

Third, replacing the corporate income tax with shareholder taxation would likely reduce the penalty on corporations relative to flow-through businesses, although the details depend on how the latter are taxed. Fourth, replacing the corporate income tax would end the penalty on equity-financed corporate investment relative to debt-financed corporate investment because there would no longer be a corporate income tax that allowed deductions for interest on debt, but not for dividend payments on equity. The impact of the reform on the latter two tax penalties would depend on how the shareholder tax is structured, as discussed below.

Open-Economy Advantages of Shareholder Taxation

Replacing the corporate income tax with shareholder-level taxation has even greater advantages in an open economy. Stated simply, shareholder-level taxation would sidestep the fundamental dilemma posed by the choice between corporate-residence-based and source-based taxation. American shareholders would pay U.S. tax on corporate income and foreign shareholders would not pay U.S. tax on corporate income, regardless of where the corporation resides or where the corporate income is earned. Neither corporate residence nor the source of corporate income would need to be defined. The U.S. tax system would no longer put U.S.-resident corporations at a disadvantage relative to foreign-resident corporations. And, no corporation, regardless of its residence, would be penalized for investing or locating profits in the United States rather than abroad.[15]

This approach is well suited to advancing American wellbeing, but it is less clear that it would advance global wellbeing. The policy would result in a diversion of capital from other countries to the United States because investment in other countries would be subject to their corporate income taxes while investment in the United States would not result in corporate income tax. The movement of capital to the United States will make the American people better off, but is likely to harm residents of other countries.

The advantages of shareholder-level taxation have been discussed by Altshuler, Harris, and Toder (2010), Gravelle (2014, 44), Graetz (2011, 7-8), Sullivan (2011, 1514), Viard (2013, 563-64), and Grubert and Altshuler (2010). A number of European countries have lowered corporate taxes and increased shareholder taxes, as discussed by Altshuler, Harris, and Toder (2010).

Nevertheless, most of the reforms proposed here and those adopted in Europe involve only a partial replacement of corporate taxation by shareholder taxation. Moreover, when the United States reduced the total tax burden on corporate income in the 2003 tax cut, it lowered shareholder taxes on dividends and capital gains rather than corporate income taxes.[16]

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[15] In principle, the shareholder tax could prompt American shareholders to move abroad. Although some high-wealth Americans have expatriated in recent years, (Knowlton, 2010) these cases are relatively rare and do not pose a serious threat to the U.S. tax system.

[16] Although the top tax rates on capital gains and dividends have subsequently been increased, the top tax rate on dividends is still lower than in 2003 and the top tax rate on long-term capital gains is lower than in 1997.

Objections to Replacing Corporate Taxation with Shareholder Taxation

As discussed above, the current tax system generally uses the realization principle, under which capital gains on corporate stock and other assets are usually not taxed until the gain is realized through a sale. If the realization principle is maintained, then replacing the corporate income tax with individual taxation of dividends and capital gains at ordinary income tax rates would worsen two important distortions.

First, corporations would have a stronger incentive than today to reinvest earnings rather than to pay dividends. Reinvested earnings have a tax advantage because the resulting capital gains are not taxed until the shareholders realize them. With higher individual tax rates on capital gains, the deferral advantage would be even larger. Corporations could be used as tax shelters if the corporation reinvests the earnings and the shareholders delay realizing the gains. Grubert and Altshuler (2010) acknowledged that this distortion would worsen under their proposal to lower corporate taxes and increase shareholder taxes.

Second, the higher tax rate on realized capital gains would worsen the lock-in effect, which is the disincentive for owners of appreciated assets to realize the gains by selling the assets. The owners can delay, and thereby reduce the real burden of, the capital gains tax by delaying sale (or escape the tax entirely by holding the asset until they die). But, doing so inefficiently locks them into investments that they'd otherwise prefer to sell. The lock-in effect has always been a leading argument for a preferential capital gains rate. Taxing capital gains at a top rate of 43.4 percent would severely discourage realizations. On a related point, the higher rate would also increase the incentive for investors to cherry-pick, accelerating their realization of losses while deferring their realization of gains. The rules limiting loss deductions would need to be tightened to counteract the cherry-picking, which could be harmful to shareholders who have actual net losses.

Also, the current system's bias in favor of debt would be replaced by a bias, probably a smaller one, in favor of equity. There would no longer be a corporate income tax to favor either over the other. But, the individual tax system would favor equity, because capital gains on equity would not be taxed until realization while interest income on debt would be immediately taxed.

A switch to shareholder taxation would also raise two other concerns. First, the elimination of the corporate income tax might make it more difficult to pursue policy objectives through the tax system. Although we generally view the automatic elimination of existing corporate tax preferences as an advantage of shareholder taxation, some tax preferences, such as the research tax credit and the low-income housing tax credit, may advance desirable policy goals. Second, the switch to shareholder taxation would face political resistance. Those who view the corporate tax as not being paid by people would object to replacing it with a tax on people who own stocks. Some people would particularly object to the elimination of U.S. tax on income that foreigners earn from corporate operations in the United States.

Fortunately, there is a solution to the worsening of the bias in favor of reinvested earnings and the worsening of the lock-in effect. The worsening of these distortions could be avoided – indeed, the distortions could actually be eliminated – by imposing the shareholder taxes on an accrual basis. Accrual taxation would also put debt and equity on a level playing field, with neither preferred over the other. Moreover, accrual taxation would offer some other benefits, such as curbing tax shelters involving financial derivatives. Accrual taxation would not, however, address the concerns of those who favor pursuing social and economic policy objectives through the tax system, as with the tax credits for low-income housing and research. And accrual taxation would actually worsen the political resistance to eliminating the corporate income tax.

We now turn to a discussion of the advantages and the major challenges of accrual taxation. We offer tentative recommendations for addressing these challenges, while recognizing that other design issues would inevitably arise as the reform was implemented.

The Case for Accrual Taxation

Under accrual taxation, sometimes called mark-to-market taxation, shareholders would be taxed each year on the rise in the value of their shares, even if they have not realized the gains by selling the shares. Accrued losses would be deductible, as discussed more fully below. Accrual taxation would apply under the regular individual income tax, the individual alternative minimum tax, and the 3.8 percent investment income surtax.

Although accrual taxation may seem novel, it has been introduced in some contexts and offers a number of economic advantages. It eliminates the payout distortion because the capital gains resulting from reinvested earnings are immediately taxed, just as dividends are taxed. Capital gains no longer enjoy the advantages of tax deferral. And, accrual taxation eliminates the lock-in effect because delaying a sale yields no tax benefit. Because there is no longer any opportunity to cherry-pick among assets with gains and losses, a full deduction can be allowed for accrued losses. Moreover, accrual taxation puts debt and equity-financed corporate investment on parity, as the returns on each would be taxed as they accrue.

Taxing dividends and accrued capital gains is superior to the option of allocating corporate profits among shareholders. The latter approach would retain the current system's complexity of computing corporate profits and, as discussed earlier in this report, would add the complexity of allocating profits among shareholders, including those who hold the stock for only a few days or weeks. In contrast, taxing dividends and accrued gains eliminates the complexity of computing corporate profits and substitutes the relatively straightforward task of looking up the change in the market value of the stock.

Moreover, dividends and accrued gains provide a better measure of the shareholder's true income than any allocation of business profits can do. Taxing stockholders on dividends and accrued capital gains is faithful to the Haig-Simon definition of income, which many economists view as the best way to think about income. Under this definition, an individual's income during a year is the amount of consumption that she does during the year plus the increase in her wealth from the beginning of the year to the end. Accrued gains are part of the stockholder's Haig-Simon income because they are an increase in wealth. Thuronyi (1983, 124-125) discusses the example of a corporation that finds oil. Business profit measures won't include the value of the oil until it is sold, but the shareholders are already wealthier. Under this reform option, the shareholders are taxed on that increase in wealth, as measured by the market's assessment of how much more the stock is worth. There's no need for the government to make its own determination of the value.

Accrual taxation is less radical than it initially appears. First, it is likely to be constitutionally permissible. Although early Supreme Court decisions indicated that the Sixteenth Amendment requires income taxes to be realization-based, later Supreme Court decisions have generally suggested otherwise. As discussed by Thuronyi (1983, 131-35), Shakow (1986, 1113 n.9), and Miller (2014), most legal scholars believe that accrual taxation is permitted by the Sixteenth Amendment.[17]

Although realization of the gain may initially seem to be the natural occasion on which the gain should be taxed, realization is actually an artificial concept, as Thuronyi (1983, 125-126) and others emphasize. Because shareholders can use various transactions to turn their gains into cash without selling the stock outright, the tax system is forced to make complex, and inevitably somewhat arbitrary, decisions about whether those transactions should count as realizations, as illustrated by the constructive-realization rules in section 1259 of the Internal Revenue Code. Also, when a shareholder who purchased multiple shares of a stock at different prices on different dates sells a share, artificial rules set forth in the section 1016 regulations must be used to identify which of the economically identical shares is deemed to have been sold, in order to determine which purchase price should be deducted against the sale proceeds. Moreover, because shareholders have an incentive to realize and deduct losses quickly while delaying the realization of gains to defer tax liability, the tax system must adopt rules to curb loss deductions, such as section 1091's restrictions on wash sales (selling a security at a loss and quickly repurchasing it) and section 1211's rule forbidding taxpayers to immediately deduct capital losses in excess of capital gains plus $3,000. In reality, gains add to wealth, and losses reduce wealth, as they accrue; realization-based tax systems use complex and artificial rules to decide whether and when those wealth changes will be recognized by the tax system.

Moreover, the Internal Revenue Code currently uses accrual taxation in three contexts. Section 475 requires securities dealers to pay tax on their holdings on an accrual basis and allows commodities dealers and securities and commodities traders to choose the accrual basis. But section 475 does not allow investors, as opposed to dealers and traders, to be taxed on an accrual basis. Section 1256 requires accrual taxation of commodity futures contracts. Section 1296 allows holders of marketable stock in a passive foreign investment company to choose accrual taxation in lieu of taxation of their pro-rated share of the company's reinvested earnings.[18] Kleinbard and Evans (1997) discuss the implementation of these provisions.

[17] Jensen (2013), citing comments that the Supreme Court made in its 2012 decision upholding the tax penalty on individuals who do not buy health insurance, argues that accrual taxation may violate the Sixteenth Amendment. He acknowledges, though, that most legal scholars view accrual taxation as constitutionally permissible.

[18] A few provisions in the Code involve other types of non-realization-based taxation. For example, depreciation and amortization deductions are intended to reflect the unrealized loss of value on capital assets. However, the deductions are not equal to the actual accrued decline in value, but are instead computed from fixed schedules that are thought to have some relationship to the expected rate of decline. Similarly, sections 1271 through 1275 tax original issue discount on bonds before realization, but the included amounts are computed on a fixed schedule that is intended to approximate the accrued rise in value of the bonds, not the actual accrued gains.

As discussed below, the president and the Ways and Means Committee chairman have proposed extending accrual taxation to certain financial derivative contracts, but not to stocks. Broader proposals for accrual taxation have been explored in the scholarly literature. The plans proposed by Thuronyi (1983) and Dodge (1995) are the most similar to our approach because they adopt accrual taxation as a replacement for the corporate income tax.[19] Thuronyi (1983, 110 n.2) also points out that accrual taxation was recommended by the Twentieth Century Fund in 1937, the Carter Commission in Canada in 1966, and a prominent tax reform commission in 1973. As he observes, though, this approach has not received the same attention as plans that would allocate corporate profits among shareholders.

Accrual Taxation of Stock in Publicly Traded Corporations

Accrual taxation cannot be applied to shares in corporations that are not publicly traded, to non-corporate businesses, or to other illiquid assets such as real estate for several reasons. First, those assets cannot be accurately valued. Second, the holders of these assets may not have cash or other liquid resources with which to pay tax on the accrued gains. We therefore reject the overly broad approaches proposed by Shakow (1986) and Brown (1996), which would have applied accrual taxation to virtually all assets except homes, consumer durables, collectibles, goodwill and other intangibles and which would have relied on eclectic valuation methods for various assets,.

Applying accrual taxation to stock in publicly traded corporations is much easier. The valuation problem disappears because the market price of the stocks is public information. Indeed, shareholders in mutual funds already receive the necessary valuation information on their mutual fund statements. To be sure, under accrual taxation, shareholders will need to compute the change in the value of their holdings each year, even if they haven't sold any shares. On the other hand, they'll be spared the current system's requirement that, when they sell, they track the amounts they paid for the stock years before, perhaps after determining which of their purchased shares they're deemed to have sold. And, given the enormous complexity of the corporate income tax, accrual-based individual taxation will be far simpler than the combination of corporate income taxation and realization-based individual taxation. The liquidity problem is much smaller for shareholders in publicly traded corporations because they are likely to have liquid assets that they can use to pay the tax and because they can sell some of the shares, if necessary, to pay the tax. We discuss ways to address any lingering liquidity concerns below.

It would be necessary to define which corporations are traded actively enough to merit treatment as publicly traded. Dodge (1995, 309-10) reasonably recommends that accrual taxation apply to corporations whose stocks is listed on an exchange, but not those whose stock is traded over the counter. Miller (2005, 1063) offers a similar proposal. Proposals by Thuronyi (1983, 121 n.45) and Louie (1982, 872-73) to apply accrual taxation only to those corporations that the Securities and Exchange Commission treats as publicly traded (large companies with more than 500 shareholders) seem unduly narrow.

[19] Halperin (1997) sketches a similar plan, but does not spell it out in detail. The plans offered by Louie (1982), Shakow (1986), Brown (1996), Weisbach (1999), Miller (2005), and Brunson (2010) would introduce accrual taxation without necessarily eliminating the corporate income tax or taxing capital gains at ordinary income rates.

Accrual Taxation of Financial Derivatives

We agree with Thuronyi (1983, 126) that accrual taxation should be extended to all liquid assets. We therefore recommend that accrual taxation apply to all publicly-traded financial assets, including those unrelated to corporate stock. The application of accrual taxation to financial assets, particularly to derivatives (such as options and swap contracts) would be independently desirable as a way to combat tax shelters. A major obstacle to its adoption is concern about inconsistencies that would arise if derivatives were taxed on accrual basis while corporate stock was still taxed on a realization basis, a problem that this proposal avoids by taxing stock on an accrual basis.

A host of tax shelters are based on exploiting the realization rules. Andrews (1983) described the realization principle as the "Achilles' heel" of income taxation; although he viewed consumption taxation as the solution, the introduction of accrual taxation into the income tax system can also address the problem. Auerbach (1993) emphasized the advantages of accrual taxation, urging economists to work on the design of accrual taxation rather than seeking more reliable estimates of the elasticity of capital gains realization.

Because of political concerns about accrual taxation of shareholders, most proposals have applied accrual taxation to derivatives, but not to stocks. The ABA Section on Taxation (2011) recommended that accrual taxation be extended to certain derivatives. The Senate Finance Committee and the House Ways and Means Committee held a joint hearing on December 6, 2011 to consider accrual taxation and other reforms. Chairman Camp's February 26, 2014 tax reform plan, drawing on a discussion draft that he released in 2013, calls for accrual taxation of derivatives on stocks, bonds and other debt instruments, partnership interests, actively traded commodities, and currencies. President Obama has proposed accrual taxation of derivatives on publicly traded property, most recently in his fiscal 2015 budget plan.

A difficult question is whether accrual taxation should be applied to derivatives on publicly traded stock, if those derivatives are not themselves publicly traded. To be sure, it is straightforward to impute a value for such a derivative based on a standard option-pricing model, but that value may diverge significantly from the true market value if the assumptions built into the option-pricing model are not valid for the derivative in question. The Obama proposal would apply accrual taxation to all derivatives on publicly traded assets, including derivatives that are not publicly traded. The Camp proposal would go even further, applying accrual taxation to derivatives on some non-publicly-traded property. The Camp proposal calls for derivatives with no readily determinable market value to be valued based on valuations that the taxpayer used in reports to shareholders, partners, lenders, or other parties.

Although it may be hard to write absolutely precise rules, a workable approach would be to extend accrual taxation to all securities that are publicly traded and all derivatives on those securities. The IRS could be given regulatory authority to refine the relevant set of securities, as necessary, without the need for congressional action. Any confusion about the proper tax treatment of securities would likely be less severe than under the current tax system, under which the proper tax treatment of certain types of derivatives remains unsettled, long after they were introduced into the market, and economically identical assets can face different tax treatments.[20]

Taxation of Non-Publicly Traded Businesses

As discussed above, accrual taxation of non-publicly-traded businesses would not be feasible. In accord with Dodge (1995), we recommend that such businesses be taxed on a flow-through basis.[21] Those non-publicly-traded businesses that are now taxed on a flow-through basis as sole proprietorships, partnerships, and S corporations would retain their current tax status and those non-publicly-traded businesses that are now subject to the corporate income tax would switch over to some type of flow-through taxation. Dodge (1995, 314-18) suggested placing all non-publicly-traded corporations, including those that now have S corporation status, under a modified form of the current S-corporation regime. Another option might be to apply the S-corporation regime to non-publicly-traded corporations with a single class of stock and to apply the partnership regime to those with multiple classes of stock.

Businesses would be subject to different tax regimes depending on whether they were publicly traded. Nevertheless, their treatment would be more uniform than under today's tax system. All businesses would be subject to a single layer of tax, although the tax would be computed in a different manner. The owners of publicly traded corporations would be taxed on their dividends and their accrued capital gains. As explained above, that is the most accurate measure of the income that owners receive from businesses. Unfortunately, it is not possible to tax owners of flow-through businesses on the cash distributions they receive plus their accrued capital gains, because the latter cannot be observed. Instead, it is necessary to tax them on their share of the businesses' profits. Although that is a less accurate measure of income, it should not diverge radically from distributions plus accrued gains. Owners of the two types of businesses are treated in a roughly equal manner; the primary difference is that any market revaluation of the non-publicly-traded businesses, due to new information about their future prospects, would not be taxed until realization, while market revaluations for publicly traded corporations would show up in accrued gains and be immediately taxed. In contrast, the current tax system makes no pretense of neutrality between the two types of businesses, as it imposes double taxation on publicly traded businesses, while allowing businesses that are not publicly traded to face only a single layer of taxation if they organize as flow-through businesses.

Businesses that are not publicly traded would still have to wrestle with the complexities of business income measurement, including depreciation, capitalization, and inventory accounting. But, those complexities would apply only to non-publicly-traded businesses, rather than to all businesses, as under the current tax system.

[20] Joint Committee on Taxation (2011, 42, 62-65) describes some examples.

[21] In principle, it would be possible to tax owners of the businesses on distributions plus realized capital gains, with an interest charge to offset the benefits of deferring tax on gains until realization. As Dodge (1995, 315-316) explains, however, that approach would be complicated to administer and hard for the public to grasp. It would also be a dramatic departure from the flow-through taxation that is now in place for most businesses that are not publicly traded.

Treatment of Losses

Under accrual taxation, there would be less need to limit loss deductions. As recommended by Dodge (1995, 331), accrued losses, at least on assets that are easy to value, would be exempt from the $3,000 limit on deducting capital losses against other income and the other limits on loss deductions, although current law limits would remain in place for losses on assets that would remain subject to realization-based taxation. Moreover, accrued losses in excess of current income should be treated as net operating losses that can be carried back to offset income in the two preceding years or forward to offset income in the next twenty years. The Camp proposal provides that treatment for losses on the derivatives to which it would apply accrual taxation. It might be necessary to retain some limits on the deductibility of accrued losses on derivatives that are not publicly traded, because taxpayers have a greater opportunity to misstate the value of those assets.

Liquidity and Volatility Concerns

We agree with Thuronyi (1983, 127-29) and Dodge (1995, 296) that liquidity would not be a serious problem for shareholders. Even in years with high rates of appreciation, shareholders should have liquid resources available to pay the tax. For example, if a portfolio rose from $10,000 to $13,000 during the year (a 30 percent rate of gain) and the tax rate was 44 percent, then even a shareholder with no other liquid assets or outside income could pay the $1,320 tax liability by selling only about 10 percent of the stock.

Nevertheless, policymakers may be concerned about perceived liquidity problems and holders of derivatives that are not publicly traded may have genuine liquidity problem that would need to be addressed. For example, some tax payments could be deferred with interest, as proposed by Shakow (1986, 1176) and Brown (1996, 1662).[22]

Liquidity concerns may be intertwined with concerns about short-run and long-run volatility. The holders of stocks that surged in value on the last day or last few days of the year might not want to pay tax on the gain if they perceive it as transitory, although paying tax then would reduce their tax in the following year. Holders of diversified portfolios could have large tax liabilities some years and large deductions other years and investors with poorly diversified portfolios might face even greater volatility.

Short-term volatility could be addressed by treating the December average price rather than the closing price as the end-of-year value, as proposed by Thuronyi (1983, 122). (That policy that would also prevent manipulation of the price through strategic trading of thinly traded stock.) Using the December average would have only a limited impact on volatility,[23] but would address concerns about day-to-day fluctuations.

[22] Thuronyi (1983, 128) points out that section 6161 already allows the IRS to defer tax payments up to six months if the taxpayer faces liquidity problems. The IRS could make expanded use of that provision under accrual taxation.
[23] From 1964 through 2013, the standard deviation of annual nominal return on the S&P 500 was 16.6 percent for returns measured between the last trading days of each year and 16.4 percent for returns measured between December averages for each year.

Large gains could be averaged across several years, as proposed by Louie (1982, 873) and Thuronyi (1983, 129), but some complexity would result. Averaging could be limited to years in which the overall market had large fluctuations, with no relief for undiversified shareholders with large gains or losses in other years; matters would be simplified if no shareholders are averaging in the majority of years.

One reasonable approach would be to allow gains that are accrued in years in which the stock market rises more than 20 percent to be averaged over a three-year period without interest. Of course, other approaches are possible.

Because significant capital gains could unexpectedly accrue late in the year, flexibility with respect to penalties for underpayment of estimated tax would be necessary.

Shares Held by Non-Profit Organizations and Tax-Preferred Savings Accounts

As Dodge (1995, 331-32) notes, the logic of applying a zero tax rate to non-profit organizations and tax-preferred savings accounts, including pension plans, implies that they should not pay tax on income from corporate stock. The removal of the corporate income tax burden on stock held by these organizations and accounts is a step toward neutrality, allowing them to enjoy the same tax exemption when they hold stock that they receive when they hold debt. As long as these holders' interest income is tax-exempt, their dividends and accrued gains should also be exempt, to maintain neutrality across assets.

In the past, however, there has been strong political interest in taxing the shares held by non-profit organizations. If desired, it would be possible to impose a flat-rate tax, maybe at a 10 percent rate or so, on dividends and capital gains received by non-profit organizations, particularly because it is not clear that all of these organizations should actually be completely tax exempt. Any such tax should also apply to these organizations' interest income, to maintain neutrality across assets.

Imposing such a tax could be justified as offsetting some of the gains that non-profit organizations and tax-preferred savings accounts would receive from the removal of the corporate income tax on the shares they own. A 10 percent tax on interest, dividends, and capital gains would often be less onerous than the current 35 percent corporate-level tax on non-profits' holdings of corporate equity. And, imposing a flat-rate tax would help address the proposal's revenue shortfall, as discussed below.

Cross-Border Issues

We recommend that Americans (U.S. citizens and residents, as defined in section 7701(b) of the Internal Revenue Code), but not foreigners, pay individual income tax on their dividends and accrued capital gains on corporate stock. The tax would apply regardless of where the corporation does business or where it is incorporated. The reform option is intended to promote national wellbeing by removing U.S. tax disincentives to invest in the United States rather than abroad. Foreign individuals in most circumstances would not pay U.S. income tax, regardless of whether the corporations in which they invest operate in the United States or abroad. American individuals would pay U.S. tax, regardless of whether the corporations in which they invest operate in the United States or abroad.

Under current law, foreigners may face a 30 percent withholding tax on dividends from U.S. corporations. That tax is generally lowered, however, if the foreigner is affiliated with a country that has a tax treaty with the United States under which the country grants similar relief to Americans receiving dividends from its corporations. Although it would be desirable to eliminate dividend withholding taxes, the elimination should be done on a reciprocal basis. The United States should not unilaterally eliminate its dividend withholding tax, but should aggressively seek treaty arrangements that would remove the tax in exchange for removal of foreign withholding taxes on American shareholders. We oppose Thuronyi's (1983, 143-44) proposal to extending withholding tax to foreign shareholders' accrued gains on stock in U.S. corporations, because foreign countries do not impose any similar tax on American shareholders.

The foreign tax credit would need to be restructured or eliminated under the reform option. Although Dodge (1995, 353-57) endorses, and Thuronyi (1983, 143) discusses, the provision to shareholders of a credit for their allocated share of the corporation's foreign income tax payments, such a credit would be complex and cumbersome. We recommend that no such indirect tax credit be provided. From the standpoint of national wellbeing, the loss of the foreign tax credit would not be a disadvantage. As Viard (2013) and Shaviro (2014, 48-51) explain, the credit greatly reduces U.S. taxpayers' incentives to avoid foreign taxes, even though avoiding such taxes would be in the American national interest.

The same logic suggests that it would not actually be desirable to give shareholders a credit for any foreign dividend withholding taxes imposed on them. Nevertheless, the provision of such a credit would likely be politically necessary and would probably do little harm. Also the credit is consistent with the practices of most foreign countries, which allow individual shareholders to claim a credit for foreign withholding taxes on dividends. The issue of how high withholding taxes should be, and therefore, who collects the revenue from these dividends, could be left to negotiations on a bilateral basis.

Tax Preferences

We generally view the removal of tax preferences as a desirable side-effect of eliminating the corporate income tax. But, there are two potential concerns.

First, tax preferences would be removed only for publicly traded corporations. Non-publicly-traded businesses would continue to be taxed on their business profits, computed with the various deductions and credits provided by the tax code. Even if a tax preference for a specific type of business activity is undesirable because it inefficiently expands the scope of that activity, it's not necessarily an improvement to remove the preference for some businesses while retaining it for others. Doing so scales back the overall generosity of the inefficient subsidy, which is good, but it also introduces a new inefficiency by artificially changing which businesses engage in the activity. On balance, though, scaling back inefficient tax preferences in this manner often will be desirable. Moreover, once the preferences have been removed for publicly traded corporations, it may become easier to remove them for other businesses as well.

Second, as discussed above, some tax preferences, such as the research tax credit and the low-income housing tax credit, may be viewed as serving desirable policy objectives, which could be undermined if the preferences were unavailable to publicly traded corporations. The issue is more serious for the research tax credit, which is primarily claimed by corporations, than for the low-income housing tax credit, which is primarily claimed by flow-through businesses.

The goals of these tax credits could be pursued by substituting direct spending programs, as Dodge (1995, 305) notes. Matching grants could be provided for qualified research expenditures or investments in low-income housing by business firms. That would be particularly easy for the low-income housing tax credit, which already resembles a spending program, featuring a fixed amount of credits that are allocated by state housing agencies. Advocates for these programs might be reluctant to have them subjected to the scrutiny of the annual appropriations process, but such increased oversight would likely be good policy. (The research tax credit already receives some scrutiny, because it is a temporary provision that must be extended every year or two).

Another option would be to make these tax credits tradable. Corporations that performed qualified research, for example, could sell the resulting tax credits, which they could not use, to flow-through businesses or individuals, who could use them.

Inflation Indexation

Policymakers would need to confront a few other design issues. They would have to decide whether capital gains should be indexed for inflation. The immediate taxation of inflationary gains at ordinary income tax rates could be viewed as harsh. For example, if the inflation rate is 2 percent and an asset yields a 3 percent real return, a 40 percent tax on the nominal 5 percent return is equivalent to a 67 percent tax on the real return. However, indexation is administratively difficult and it is problematic to index some assets without indexing other assets and liabilities. Moreover, indexation would increase the revenue loss from the proposal, discussed below. While it would likely be desirable for a comprehensive indexation system to be adopted if it is administratively feasible, we follow Thuronyi (1983, 122-23) in recommending that indexation of capital gains in isolation not be adopted under the accrual regime. We agree with his observation that accrual taxation makes sense, whether or not the tax system is indexed for inflation.

Impact on State Tax Systems

As discussed by Thuronyi (1983, 144), the reform would have some impact on state corporate income taxes, which could no longer piggyback on the computation of the federal corporate tax base. Because state corporate income taxes make even less sense than the federal corporate income tax, it would be desirable for states to drop their corporate taxes and piggyback off of the new accrual regime. But, each state could make its own choice.

The Transition

It may be desirable to repeal the corporate income tax only gradually, as proposed by Thuronyi (1983, 141). Conversely, the tax rates on dividends and capital gains would be increased only gradually. Gradual phase-in of the new system would limit the gains and losses on existing investments, which were made under the expectation of firm-level taxation.

However, the switch to accrual taxation should be immediate, as it would not be practical to have realization and accrual taxation existing alongside each other. In the first year of the reform, for example, capital gains would become subject to accrual taxation at the current tax rates and the corporate income tax would be lowered to reflect the heavier tax burden on gains arising from the introduction of accrual taxation. In subsequent years, the tax rate on dividends and gains would be increased and the corporate income tax would be further reduced, until the corporate income tax was eliminated and dividends and gains were taxed at ordinary income rates.

The treatment of the unrealized gains in existence on the effective date of the reform poses two issues: when should those gains be taxed and at what rate?

Because taxing the gains in the first year would be perceived as onerous, it would be preferable to tax them over an extended period, at the cost of a little complexity, as Thuronyi (1983, 123-24) and Weisbach (1999) recommended. We reject the proposal by Louie (1982) to defer tax until the gains are realized, as that would maintain a lock-in effect and could maintain vestiges of the old system for decades. Instead, tax should be collected over a prescribed time period, perhaps 10 years.

The other question is whether the pre-effective date accrued gains should be taxed at the current-law preferential rate (20 percent for high-income shareholders) or at the ordinary-income rates that will apply to subsequent gains. We recommend that the gains be taxed at the current-law preferential rate. One argument for this approach is that some of the gains may reflect the reinvestment of corporate profits that were subject to the corporate income tax, in which case the gains should receive the current-law preferential treatment that was provided to alleviate double taxation. Of course, some of the gains may be due to the market's revaluation of the corporation's future earnings prospects rather than the reinvestment of taxed corporate profits. In any case, regardless of how the gains originated, shareholders expected at the time of accrual that they would pay tax at the preferential rate and could defer tax indefinitely until realization or possibly even escape tax by holding the assets until death. To upset their expectation of the preferential rate, on top of upsetting their expectation of deferral, would appear to be unwarranted.

The accrual taxation of derivatives should apply to newly issued contracts, as proposed by Chairman Camp and President Obama.

Another set of transition issues concerns movements by businesses into or out of publicly traded status. If a non-publicly-traded business goes public, the unrealized gains on that date should be treated in a manner similar to the stock of unrealized gains when the reform is adopted. In accord with our recommendations above, the gains should be taxed at the preferential capital gains rate.

Finally, the effective elimination of corporate preferences under the accrual taxation option raises the issue of what transition rules might be necessary for industries that might be adversely affected. For example, regardless of what is done with the low-income housing credit for new low-income buildings, corporate investors in existing low-income buildings should be allowed to receive their remaining credits on those buildings in some form. The budgetary consequences of this transition relief would be minor, because corporations claim only a small fraction of low-income housing tax credits.

Revenue and Distributional Issues

This reform option would result in a net revenue loss, as Dodge (1995, 306-8) noted. The revenue gain from increasing dividend and capital gains rates and switching to accrual taxation would not fully offset the revenue loss from elimination of the corporate income tax. Although the net revenue loss cannot be precisely determined in the absence of a detailed proposal, the Tax Policy Center has kindly supplied us with a rough estimate, with numbers expressed at fiscal 2015 levels.

The corporate income tax is assumed to raise $357 billion, which is based on the assumption that corporate tax revenue is equal to a normal percentage of GDP.[24] That revenue would be lost under the reform option. There would be a partial offset, however, because the $357 billion not paid to the government would show up as additional income for stockholders and workers, on which they would pay an estimated $37 billion of tax.[25] The net revenue loss from corporate tax repeal would therefore be $320 billion. The tax at ordinary income tax rates on dividends and accrued capital gains on corporate equity would raise $237 billion, under the assumption that corporate equity yields a 7 percent nominal rate of return, and taking into account the fact that a portion of corporate equity is held by non-profit organizations and retirement plans that are exempt from tax. Because the current-law tax at preferential rates on dividends and realized capital gains raises only $85 billion, the change in shareholder taxes generates a revenue gain of $152 billion. Subtracting this gain from the $320 billion loss in corporate tax revenue yields a net annual revenue loss of $168 billion at 2015 levels.

Various features not included in the basic estimate could increase or reduce the revenue loss. Gradually phasing in the reform over a 10-year period, as proposed above, would reduce the revenue loss within the budget window. And, the taxation of gains that accrued prior to the effective date would also raise revenue within the budget window. But the plan should aim for long-run budget neutrality. Because the smaller revenue loss in the budget window would be temporary, it should not be used to

[24] The actual corporate tax revenue that the Congressional Budget Office projects for fiscal 2015 is greater due to the aftermath of the bonus depreciation allowed in 2008 through 2013. (Because part of the costs of the assets placed in service in those years was immediately expensed rather than depreciated over a period of years, less depreciation will be deducted in 2015 than would otherwise have been the case.) The use of a normal level of corporate tax revenue therefore provides a better measure of the long-run revenue effects.

[25] This estimate is based on TPC's assumption that, in the long run, 60 percent of the burden of the corporate income tax is borne by corporate shareholders, 20 percent by all recipients of investment income, and 20 percent by workers. The Congressional Budget Office and the U.S. Treasury Department make roughly similar assumptions about who pays the corporate income tax. See Nunns (2012). The estimate excludes additional revenue that would come from taxes on corporate dividends and realized capital gains, because these taxes would be repealed and replaced by a single tax on all accrued corporate income at the individual shareholder level.

justify permanently smaller budgetary offsets, although it would provide some room for the offsets to be phased in. The imposition of a flat-rate tax on the dividends and accrued gains (and possibly interest income) of non-profit organizations would reduce the revenue loss.[26] The allowance of a credit for foreign dividend withholding taxes would slightly increase the revenue loss, as would the creation of a spending program or tradable tax credit to replace the current research and low-income-housing tax credits claimed by corporations.

The elimination of the corporate income tax would primarily benefit higher-income households and the increase in shareholder taxation would primarily burden higher-income households. For three reasons, though, the shareholder tax is somewhat more progressive than the corporate income tax that it replaces. First, part of the corporate income tax burden (20 percent in the Tax Policy Center's model) is borne by workers rather than by owners of capital. Workers are burdened because the corporate income tax reduces investment and the capital stock inside the United States and the smaller capital stock reduces labor productivity and thereby drives down wages. In contrast, the shareholder tax does not drive investment out of the United States, as explained above, and its burden should fall on owners of capital. Second, a significant share of the portion of the burden borne by capital falls on income accrued within qualified retirement plans. Although income from qualified retirement plans goes mostly to households in the top quintile of the income distribution, it is much less concentrated at the top than is investment income earned outside of retirement plans. Third, among individual recipients of capital income, the corporate income tax rate does not vary based on the income level of each stockholder. In contrast, the shareholder tax is imposed at each individual shareholder's ordinary tax rate, with higher-income shareholders paying higher tax rates than lower-income shareholders. An equal-revenue replacement of the corporate income tax with shareholder taxes would therefore shift the tax burden upward. Because the replacement is a net tax reduction, however, many high-income households are likely to get a tax cut.

Accordingly, it is appropriate that the revenue loss be offset by curtailing high-income tax preferences*.* Options include curtailing the mortgage interest deduction, taxing employer-provided health insurance above a floor amount, eliminating or restricting the municipal bond interest exclusion, and trimming the deduction for state and local taxes.

Political Challenges

As discussed above, the general public is likely to resist the idea of lowering taxes on corporations and raising them on people, even though corporate taxes are actually paid by people. Taxing people on gains that they have not realized is likely to intensify the opposition. Many taxpayers may have a visceral dislike of accrual taxation because they do not view unrealized gains as truly being income. Zelinsky (1997) emphasizes this point. Similarly, Potter (1999), who expressed sympathy for the concept of accrual taxation, noted the deep-rooted public hostility to it, along with valuation problems and the difficulty of defining which assets would be covered. In a January 9, 2014 discussion of proposals for

[26] The Obama administration estimates that its proposal to apply accrual taxation to derivatives would raise very little revenue, less than $1 billion per year after the first several years. The Joint Tax Committee estimates a revenue gain of about $2 billion per year from Chairman Camp's accrual-taxation proposal.

accrual taxation, Joint Tax Economist Karl Russo, as quoted by Davis (2014, 272), commented, "I think the main reason for the policymakers [in Congress] to want to step back from marking everything to market – including stuff like IBM stock where everyone knows what the price is going to be – is a political question. They don't think as a political matter that they can have retail investors marking to market – that is just not going to fly."

To limit political objections, the set of taxpayers subject to accrual taxation could be limited. Potter (1999), for example, proposed that accrual taxation apply only to corporations and wealthy individuals and suggested that it be marketed as a way to prevent abuse. Miller (2005) proposed that accrual taxation apply only to individuals with adjusted gross income of at least $1.6 million or publicly traded property of at least $5 million and companies with at least $50 million of net assets. This extremely narrow scope of accrual taxation is unacceptable, though, as it would greatly increase the revenue loss and would greatly dilute the economic advantages of switching to accrual taxation. Moreover, taxpayers' movements between covered and uncovered groups would create complexity.

We reject proposals, such as that by Thuronyi (1983, 126) that would apply accrual taxation to stockholders with gains above a threshold and realization taxation to those with gains below the threshold, because having a mix of the two regimes would be unduly confusing. A better approach would be to exempt from tax the first $1,000 of net capital gains or losses received by each taxpayer, a measure also included (for realized gains and losses) in the Bipartisan Policy Center's November 2010 deficit reduction plan. Small shareholders would then not encounter the accrual tax regime, blunting the political objections.[27]

Conclusion

The difficulty of defining corporate residence and the source of corporate income pose fundamental challenges for the U.S. corporate income tax, which are not adequately addressed by the reform plans currently under consideration. This report discusses two structural reform options that would directly address the fundamental challenges.

The first option would involve international agreement on uniform and rational rules for defining the source of corporate income. The option would curb profit shifting across countries, especially to low-tax jurisdictions where little real corporate activity is occurring, while protecting the competitive position of U.S.-resident multinational corporations. It would not require major changes in the architecture of the U.S. income tax system, elaborate transition rules, or a major break from accepted international norms for taxation of cross-border income. It would, however, require a degree of international cooperation that may prove very difficult to achieve and its effects on corporate tax revenue and incentives to invest in the United States would depend critically on the specifics of how taxable income of MNCs is allocated among countries.

[27] There would also be some administrative benefits, as stockholders who knew that their gains were well below the $1,000 threshold would no longer need to compute their gains. However, those close to the threshold would have to do the computation to determine whether they were above or below the threshold.

The second option, which could be adopted unilaterally by the United States, would replace the corporate income tax with increased taxation of shareholders. American shareholders of publicly traded companies would be taxed on both dividends and capital gains at ordinary income tax rates and capital gains would be taxed upon accrual. The option would ensure that American shareholders in both U.S. and foreign-based multinational corporations pay tax on their worldwide income, while improving incentives for both domestic and foreign corporations to invest in the United States and increasing the competitiveness of U.S.-resident MNCs. It would also curtail a host of closed-economy distortions, including the current system's biases against corporate equity-financed investment, dividend payments, the sale of appreciated assets, and specific industries and types of capital. But it would face a number of design challenges and would reduce federal revenue. It would also confront severe political obstacles because it would be perceived as a giveaway to corporations, it would tax accrued gains that many shareholders do not consider to be income, and it would require other tax increases or spending cuts.

The authors of this report do not have identical views about the two options. Toder sees value in both approaches - the international cooperation option addresses the biggest problems with the corporate tax system by strengthening existing institutions and avoids a radical break with existing practices while the accrual tax option moves closer to an ideal tax base. He also believes that it is possible to combine elements of both approaches by increasing shareholder-level taxation to finance reductions in the U.S. corporate tax rate while striving to reach agreement with other countries on a better method of allocating income of MNCs. Although Viard sees some benefit from the international cooperation option, he prefers the shareholder taxation option because it addresses a much wider range of distortions (although still not to the same extent as consumption taxation, which he views as the ideal approach). Both authors agree, however, that the tax reform debate must move beyond the incremental plans now being discussed to consider proposals that address the basic flaws in the way we tax income from multinational corporations.

APPENDIX A: History of the U.S. Corporate Income Tax

The top U.S. corporate tax rate has ranged between 34 and 52.8 percent over the past 70 years (**Chart 2**). It stood at 40 percent through the World War II years, dropped to 38 percent after the war, but then rose in stages to 52 percent during the Korean War (1950-53). The 1964 tax cut lowered the rate to 48 percent, where it stood until 1978, except for the 1968-69 Vietnam War surtax, which raised it to 52.8 percent. The 1978 tax cut lowered the rate to 46 percent and the Tax Reform Act of 1986 (TRA86) reduced the rate to 34 percent by 1988. The Omnibus Budget Reconciliation Act of 1993 (OBRA93) raised the corporate rate to 35 percent, where it has remained for the past two decades.

At the same time, the maximum tax rates on corporate dividends and long-term capital gains have generally declined, especially the tax rate on dividends. The maximum dividend tax rate followed the maximum rate on ordinary income, reaching a confiscatory level of 94 percent during World War II before dropping in successive tax rate cuts to 28 percent by 1988. OBRA93 increased the rate to 39.6 percent, but the 2003 tax cut reduced the rates on both dividends and long-term capital gains to 15 percent. The top rates on long-term gains and dividends rose to 23.8 percent in 2013 because the top income tax rate on these items rose from 15 percent to 20 percent under the American Taxpayer Relief Act of 2012 and a 3.8 percent investment income surtax on high-income taxpayers enacted in the Affordable Care Act of 2010 took effect.

While the top U.S. corporate tax rate has remained roughly constant since 1986, tax rates in the rest of the OECD have declined (**Chart 3**). As a result, the U.S. rate, which dropped below the GDP-weighted OECD average after TRA86, is now about 10 to 12 percentage points higher, depending on the weighting method used to average other countries' tax rates.

Corporate tax revenue depends on the corporate tax rate, the size and profitability of the corporate sector, the measure of profits to which the rate is applied, and tax credits. Between the 1950s and the 1980s, corporate tax revenue fell from around 5 percent of GDP and 30 percent of total federal revenue to less than 2 percent of GDP and 10 percent of federal revenue (**Chart 4**). This trend reflected declines in both the effective corporate tax rate and the ratio of corporate profits to GDP. The main source of the decline in the effective tax rates was more generous capital recovery provisions, such as the investment tax credit and accelerated depreciation, offset in part by the combination of higher inflation in the 1960s and 1970s and the failure to adjust the cost basis of assets for changes in the price level (Auerbach and Poterba, 1987; Amerkhail, Sunley, and Spooner, 1988). Corporate profits decreased as a result of the growing use of debt financing and increased interest rates through 1981 (Amerkhail et al., 1988; Nelson, 1988).

TRA86 reduced the corporate tax rate from 46 to 34 percent, but increased corporate tax revenue by eliminating the investment tax credit, lengthening depreciation schedules (especially for structures), and reforming capitalization rules. Since the late 1980s, corporate tax revenue has fluctuated with the business cycle, but has generally averaged slightly over 2 percent of GDP and around 12 percent of federal revenue.

APPENDIX B: Depreciation, Expensing, and the Marginal Effective Tax Rate

The timing of deductions for capital expenditures is particularly important for determining the marginal effective tax rate. In general, the costs of acquiring assets are not immediately deductible because they represent an exchange of one asset (cash) for another (equipment, buildings, or inventory) instead of a net cost of doing business. Instead, outlays for acquiring assets can be deducted over time as the asset is sold (inventory), declines in value with use (equipment or buildings), or is used up or depleted (fuels or minerals extracted from a well or mine with finite capacity).

If the allowable rate of depreciation accurately reflects the rate at which assets decline in value and no other special provisions apply, then the marginal effective rate of tax is equal to the statutory rate. In contrast, if companies can expense the costs of capital investments (fully deduct them in the year the investment is made), the marginal effective tax rate on the investment is zero. Expensing essentially makes the government a partner in the investment, sharing in the cost through the up-front deduction of the investment outlay and receiving in return the same share of the future profits as tax revenue.

Precise calculations of marginal effective tax rates are difficult because it is hard to measure the rate at which assets decline in value, especially in cases of business equipment for which there is not a fully developed secondary market for used assets. Most research finds that the marginal effective tax rate is, on average, somewhat below the statutory rate, but that marginal effective tax rates vary considerably across assets and industries. In general, machinery and equipment receives favorable treatment compared with structures or inventory due to accelerated cost recovery provisions. Investments in research are expensed and also benefit from the research and experimentation credit. Investments in energy and mineral development are mostly expensed and some companies receive the benefit of the percentage depletion method for cost recovery, under which deductions often exceed costs of development over the life of the property.

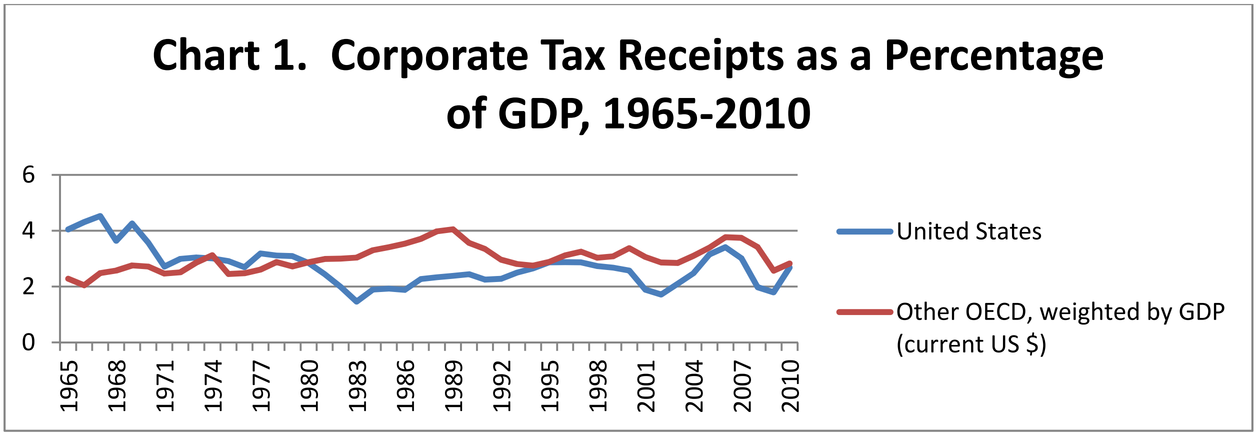
Chart 1. Corporate Tax Receipts as a Percentage of GDP, 1965-2010
6
4
2
0
1965
1968
1971
1974
1977
1980
1983
1986
1989
1992
1995
1998
2001
2004
2007
2010
United States
Other OECD, weighted by GDP (current US $)

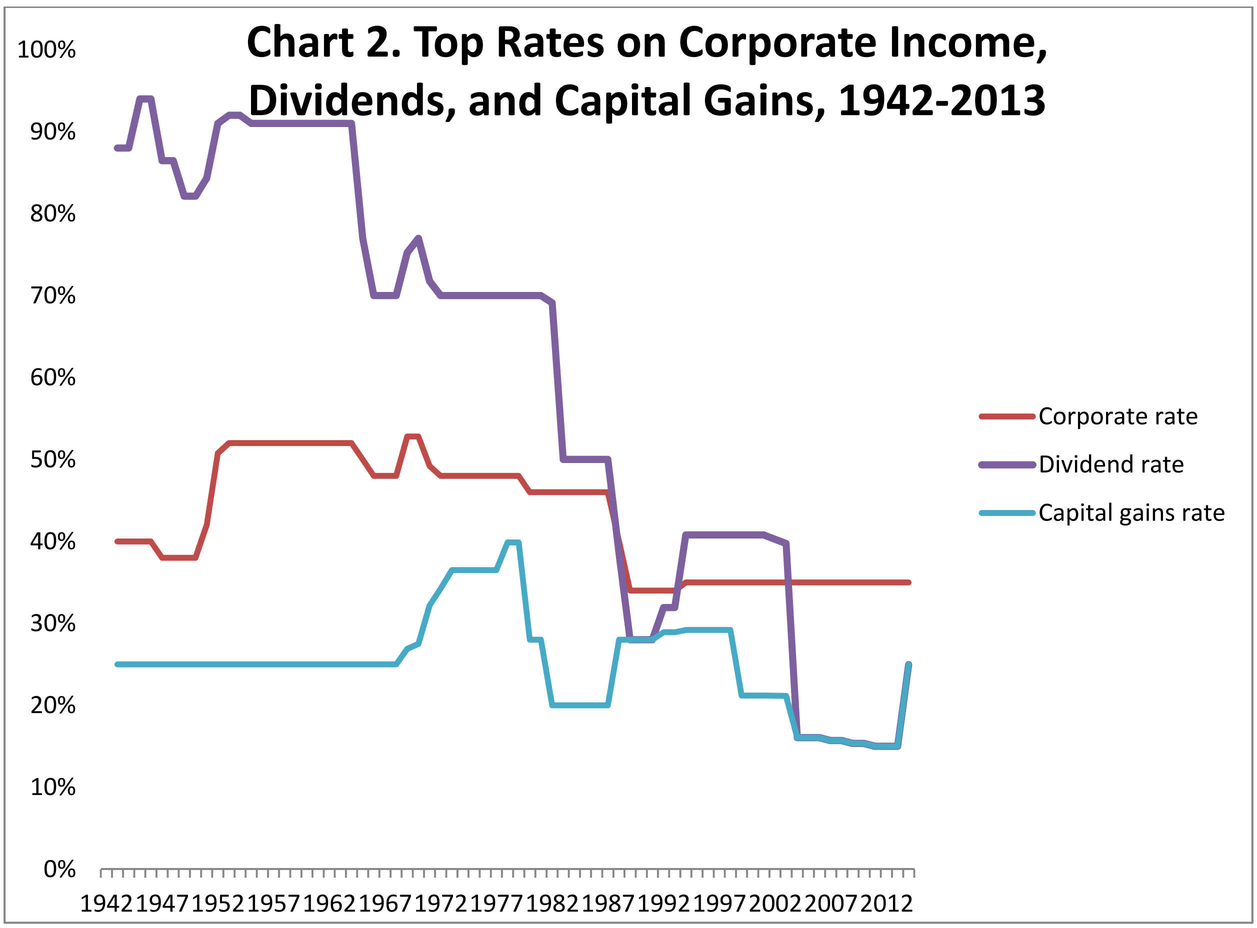
Chart 2. Top Rates on Corporate Income, Dividends, and Capital Gains, 1942-2013
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1942
1947
1952
1957
1962
1967
1972
1977
1982
1987
1992
1997
2002
2007
2012
Corporate rate
Dividend rate
Capital gains rate

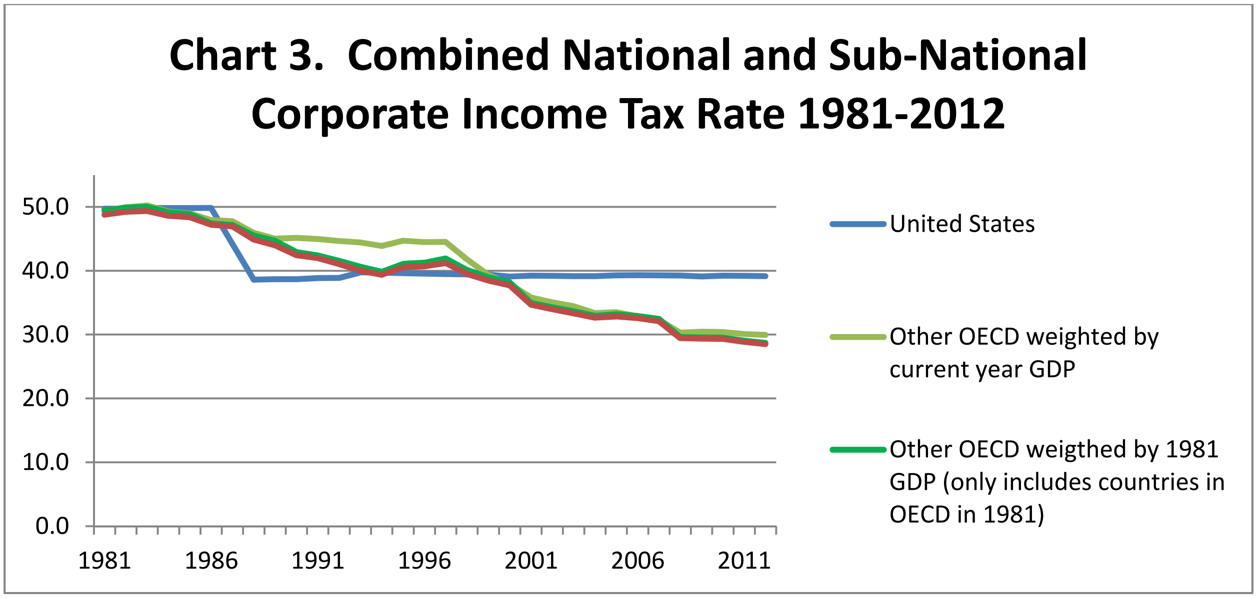
Chart 3. Combined National and Sub-National Corporate Income Tax Rate 1981-2012
50.0
40.0
30.0
20.0
10.0
0.0
1981
1986
1991
1996
2001
2006
2011
United States
Other OECD weighted by current year GDP
Other OECD weigthed by 1981 GDP (only includes countries in OECD in 1981)

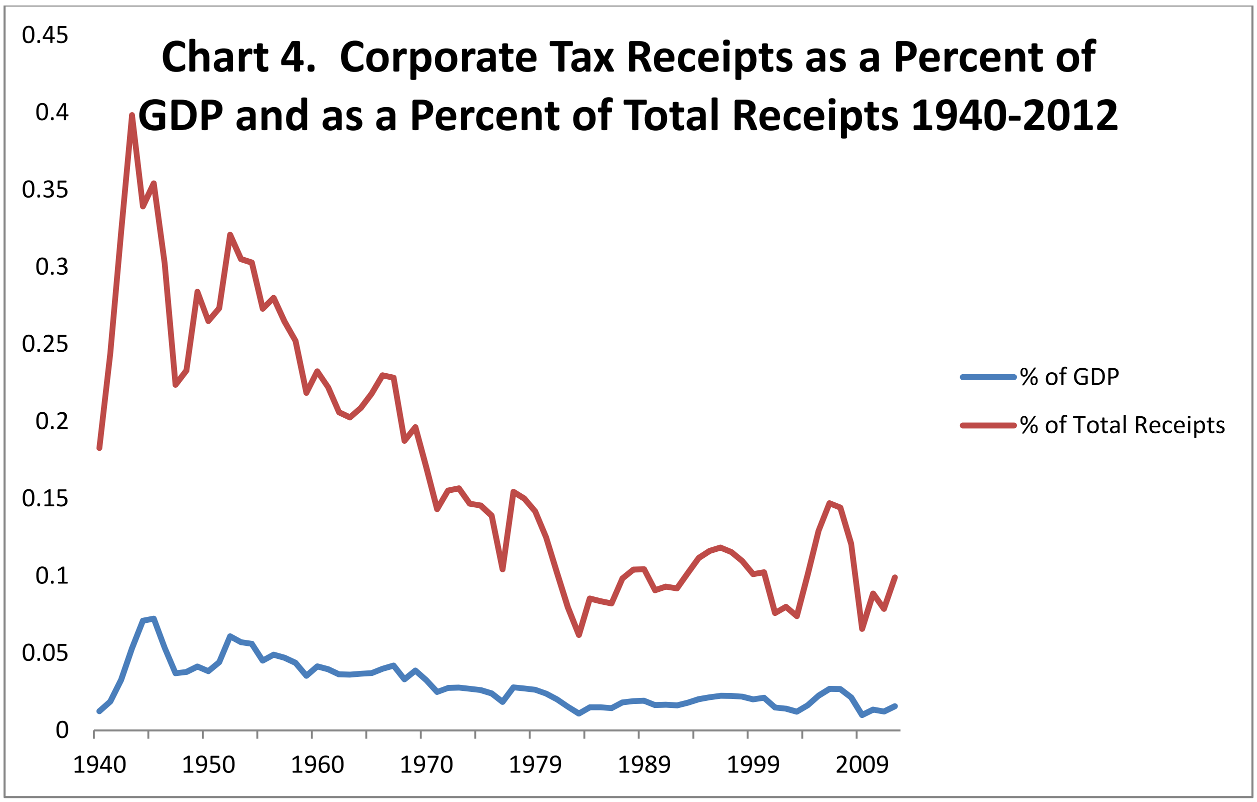
Chart 4. Corporate Tax Receipts as a Percent of GDP and as a Percent of Total Receipts 1940-2012
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
1940
1950
1960
1970
1979
1989
1999
2009
% of GDP
% of Total Receipts

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