Policy Options for Taxing the Rich

AUTHORS

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ABSTRACT

The U.S. economy exhibits high inequality and low economic mobility across generations relative to other high-income countries. The United States will need to raise more revenues in order to reduce these disparities, finance much-needed new services and investments, and address the nation's long-term fiscal needs. This paper outlines policy options for raising a large amount of revenues primarily from the most affluent, first discussing potential incremental reforms and then focusing on four main options for more structural reform: dramatically increasing the top tax rates on labor and other ordinary income; effectively taxing the wealthy on accrued gains as they arise and at ordinary rates; a wealth tax on high-net-worth individuals; and a financial transactions tax. Although we summarize the relative advantages and disadvantages of these approaches, we generally conclude that they all merit serious consideration. Several options are also complementary to one another. In practice, however, the relative strengths of each of these policies will depend to a large extent on how each is designed after it has made its way through the legislative and regulatory process.

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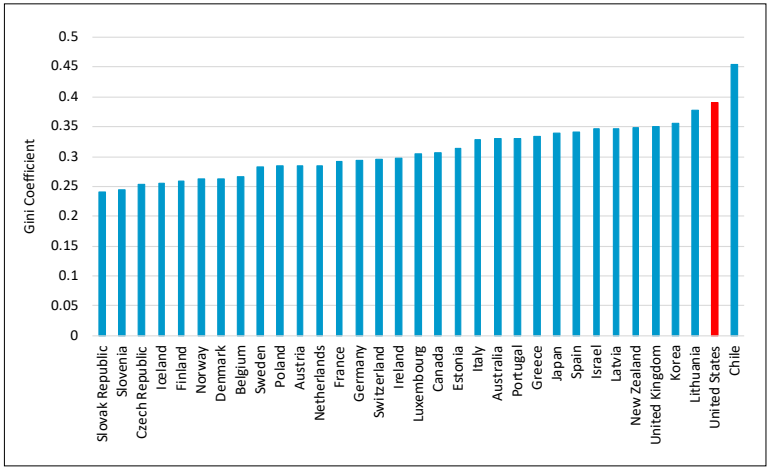
1. Introduction: Why Raise More Revenues From the Wealthy?

The United States has one of the highest levels of income and wealth inequality among high-income nations. As illustrated in Figure 1, the United States has the second highest level of income inequality after taxes and transfers among 33 Organisation for Economic Co-operation and Development (OECD) countries. It has the highest level of wealth inequality in the OECD (Balestra & Tonkin, 2018). Income and wealth inequality are heavily skewed by race. Average net worth for blacks in the United States is only 14% of that for non-Hispanic whites (Wolff, 2018). As a group, the top 1% in the United States receives more income than the bottom 40% and owns more wealth than the bottom 95% (Wolff, 2017).

Further, the United States has one of the lowest levels of intergenerational economic mobility among high-income countries. On average, a father in the United States passes on roughly half of his economic advantage or disadvantage to his son (Corak, 2013). Among other high-income countries, the comparable figure is typically about one-third, and in several countries it is one-fifth. There are even larger mobility barriers among some communities of color. Black men in particular have far less upward mobility and greater downward mobility than others, and to such a large extent that the current black–white income gap is not projected to change at all if these mobility dynamics persist (Chetty, Hendren, Jones, & Porter, 2018).

Thus, to an unusually large extent in the United States, economic disparities between individuals reflect the luck of one's birth and systemic discrimination, not hard work.

Figure 1. Income Inequality After Taxes and Transfers in OECD Countries



Source: Authors' calculations based on OECD (2019). We use the most recent year available from 2014 to 2016 and exclude countries for which no data on transfers is available. See Huang and Frentz (2014) for discussion of the OECD methodology. The Gini coefficient is a measure of income inequality.

One of the ways we can begin to address these vast disparities of income and opportunity is through a more progressive fiscal system that expands much-needed investments in individuals who do not benefit from such privileges.

In addition, the United States faces a long-term fiscal shortfall. There is reason to believe that debt may pose fewer risks to the economy than it has in the past, given the long-term decline in interest rates and the substantial fiscal capacity in the United States and other high-income economies (Blanchard, 2019; Furman & Summers, 2019). Nonetheless, most economists agree that markets would eventually react if debt grew continuously as a share of the economy, which current projections suggest it will absent policy changes (Gale, 2019).

For instance, the Congressional Budget Office (CBO) projects that, under current law, the federal debt will rise from about 80% of Gross Domestic Product (GDP) today to almost 150% by 2050 (CBO, 2019). Stabilizing the debt-to-GDP ratio over this period will require reducing annual deficits by about 2% of GDP—and more than double this if expiring provisions, which include much of the 2017 tax cuts, are continued.[1]

Despite these pressing needs, U.S. federal revenues as a share of GDP were 16.5% in 2018. This is 1 percentage point below the average over the past 50 years, even though we are in the midst of an economic expansion (CBO, 2019). As of 2017, total U.S. revenue as a share of GDP was already 7 percentage points below the OECD average, and that was before the 2017 bill's tax cuts took effect (OECD, 2019c).

Theoretically, it is possible to raise sufficient revenues to stabilize our fiscal outlook and create a more progressive fiscal system with tax increases that apply across the economic distribution, not just to the wealthy. For example, every other high-income country in the world has a federal value-added tax (VAT) (Tax Policy Center, 2019a). If the United States followed the model of other high-income countries of raising much more revenue from broad-based taxes, principally a VAT, and spending it in relatively progressive ways, economic disparities would decline, though not necessarily between the upper-middle class and the wealthy.

But if history is any guide, the United States may not follow this model. We redistribute relatively little through our fiscal system, ranking 28 out of 33 OECD countries.[2] But to the extent we do, we are the only OECD country that relies roughly equally on the tax system and direct spending programs to mitigate economic disparities (Joumard, Pisu, & Bloch, 2012). All others rely more heavily on direct spending programs, and often dramatically so.

If the United States persists with its relatively tax-focused model of redistribution, reducing economic disparities and stabilizing our fiscal outlook will requiring raising

1 Authors' calculations based on CBO (2019).

2 Author's calculations based on OECD (2019).

substantial new revenue from measures that focus to a large extent on the affluent, rather than the public at large. Accordingly, this essay focuses on the pros and cons of different options for raising substantial additional revenue over the next decade primarily from the wealthy.

2. What Is Wrong With the Current System?

Beyond raising insufficient revenues, there are a number of serious problems with the current U.S. approach to taxing wealthy individuals. Broadly speaking, the current system offers too many ways for those with the greatest resources to escape tax, either by reducing their effective tax rate or avoiding taxes altogether. The result is that, while some at the top are taxed at the highest rates, many are not. Absent changes to the tax base that make it harder to avoid taxes, many wealthy individuals would be largely unaffected by increases to the top statutory tax rates.

2.1 How Those at the Top Differ

Those at the top earn income and accrue wealth in fundamentally different ways than the rest of the population. Wages comprise the vast majority of income for those outside of the top 1% of income. Tax avoidance and evasion are rare for wage income because it is subject to information reporting and withholding, and because wage earners generally cannot manipulate the timing of income recognition (Slemrod, 2007).

But those at the top earn or report their income differently. Much more of their income comes from capital gains, dividends, and income flowing through business entities. These forms of income are often eligible for preferential rates. For example, in 2016, wages and salaries comprised only 10% of the income of the top 0.001%, while capital gains and dividends taxed at preferential rates made up 71% of their income, with business income comprising the remainder (Batchelder & Kamin, 2019).

Further, the actual share of income that those at the top derive from capital gains and business income may be substantially higher. That is because it is easier to legally defer paying tax on such income, or even eliminate the tax on it entirely. For instance, as explained in more detail below, gains on property only have to be reported when they are "realized"; that is, when property is sold or exchanged. Gains on property are also more often (illegally) underreported because they are not subject to withholding or, sometimes, information reporting. Thus, the data we use here, which rely on reported income from tax returns, understates the share of income that the wealthy earn from these sources.

2.2 Tax Avoidance Strategies Used by the Wealthy

High-income Americans and the entities they own make use of a number of tax avoidance strategies, which we describe in more detail in Batchelder and Kamin (2019). Many involve shifting income from a high tax rate category to a low or zero tax rate category. Of course, there are often costs of making such shifts, such as lawyer fees and difficulties in restructuring transactions, so not all income ends up in the lowest rate category. But, high-income Americans still have plenty of opportunities to engage in such shifting.

There are several reasons why the wealthy are able to pay tax at much lower rates than the headline tax rates imply, and the 2017 tax law made this problem worse.

First, the wealthy tend to characterize a large share of their income from labor as income from business entities, which now can be subject to much lower rates even if it is ordinary income. Smith, Yagan, Zidar, and Zwick (2016) estimate that three-quarters of the business profits received by the wealthy derive from their human capital, not physical or financial capital.

Before the 2017 law, characterizing labor income in this way—as ordinary income being earned through a business—could achieve some real but relatively limited tax savings for the wealthy. The 2017 law substantially expanded opportunities to use business entities to avoid the top rate (for further discussion, see Kamin et al., 2019).

The wealthy now have two main options for using business entities to achieve substantial tax savings relative to being taxed at the top rate. One is to characterize their income as earned through a pass-through business entity—the vast majority of which is eligible for a 20% deduction under the 2017 tax law (JCT, 2019; Goodman, Lim, Sacerdote, & Whitten, 2019). This can bring their top marginal rate down from 40.8% to 29.6% if they also take advantage of loopholes in the Medicare self-employment tax (SECA) and the net investment income tax (NIIT). Alternatively, they may claim that their income—including their labor income—is earned by a business they own that is subject to the corporate income tax (so-called C-corporations). In the wake of the 2017 tax law, the top tax rate on such income is only 21%, down from 35%. Wealthy individuals who report income through a C-corporation do have to pay personal income taxes on dividends or realized capital gains on their stock at a top rate of 23.8% (including the NIIT). But this tax can be deferred indefinitely or eventually disappear if the stock is held until death or another loophole is used to escape the second layer of tax.

Second, the wealthy who elect the pass-through route can often claim their income, including their labor income, as long-term capital gains or dividends. In this case, the top rate falls from 40.8% to 23.8%. If they take advantage of SECA and NIIT loopholes, they can further lower their top tax rate to 20%. Carried interest—available to managing partners in private equity and similar industries—is just a small example of this widespread practice of converting income from labor into lower-taxed capital gains.

Third, the wealthy can often afford to defer realizing capital gains. If they do so for a long enough period of time, the present value of their top tax rate on such gains approaches zero. And if they do so until their death, the top tax rate is actually zero, thanks to a provision called "stepped-up basis," which forgives tax on such accrued gains. Their top tax rate can also be zero if they donate appreciated property to a charity like a family foundation, even if they maintain some degree of control over it. Further, to the extent the wealthy do realize gains on some property, they can choose to sell other property with built-in losses to offset those gains.

Fourth, multinational corporations—whose owners are disproportionately wealthy—can achieve very low tax rates by exploiting differences in tax rates across international boundaries. These corporations report large amounts of income in tax havens (Zucman, 2014; Clausing, 2019a).

Fifth, while a large share of the income of the wealthy is derived from labor income, a substantial share is also the product of inheritances. Inherited income is entirely excluded from both the income tax and payroll tax bases. The estate tax and related wealth transfer taxes were meant to partially address this omission. But the exemptions are so large ($22.8 million per couple in 2019) and the base so porous that income in the form of inheritances was taxed at an average rate of less than 4% in 2009, and is taxed at even lower rates today (Batchelder, 2009).

Finally, enforcement of the existing tax laws governing the wealthy is weak and getting weaker. The audit rate for the top 1% has declined dramatically—by about 80% since 2011—and is only 1.6% today (Kiel, 2019).

All of this means that the wealthy are taxed at a wide range of rates, depending on how they report their income. There is considerable evidence that high-income Americans, and the entities they own, take advantage of this menu of tax planning options to substantially reduce their tax bill. The exact magnitude is hard to quantify because much avoidance is simply unmeasured, at least directly, or is not considered a tax underpayment because it is legal under current law. Nevertheless, an array of evidence points to very large magnitudes of foregone revenue. We summarize some of this evidence in Batchelder and Kamin (2019).

3. Selected Revenue Options Within the Current System

Within the basic structure of the current tax system, policymakers have proposed a range of policies that would raise considerable revenue from those with the greatest resources. In Table 1, we list several of these proposals to provide a sense of scale. This section is not a comprehensive compilation of all such measures, as there are many.

All of the proposals listed focus either solely or disproportionately on those with the greatest resources or the businesses they own. For organizational purposes, the table is broken down between direct repeal or reform of elements of the 2017 tax legislation,

along with further measures that could be taken. A number of these proposals would, in addition to raising revenue in a progressive fashion, reduce complexity and wasteful tax planning. We consider many to be good ideas. But since they have, for the most part, been discussed in other contexts and do not involve fundamental shifts in the system, we do not delve into the details or relative pros or cons of each here.

Table 1: Incremental Revenue Measures

2021-2030 (BILLIONS)	CURRENT LAW	CURRENT POLICY
Repeal or Reforms of 2017 Tax Law		
Return Top Individual Rate to 39.6% from 37% (1)	$90	$200
Reverse Doubling of Estate Tax Exemption (back to $11.4M per couple) (2)	$60	$110
Repeal Pass-Through Deduction (2)	$280	$620
Increase Corporate Rate to 28% from 21% (2)	$730	
Raise Minimum Tax on Foreign Income to 21% + Apply Per Country (3)	$340	
Sub-Total	**$1,500**	**$2,000**
Additional Measures		
10% Surtax on AGI Above $2 Million (4)	$610	
Tax Accrued Gains at Death and Increase CG/Dividends Rate to 28% (5)	$290	
Broaden Base of Self-Employment Tax + 3.8% ACA Surtax (5)	$280	
Cap Value of Itemized Deductions at 28% (6)	$410	$310
Estate Tax: $7M Per Couple Exemption, 45%-65% Rate, Limit Avoidance	$310	
Return to 2009 Parameters + Anti-Avoidance Measures (5)	$210	
Increase Rates on Largest Estates (Max = 65% on Transfers >$1B) (7)	$100	
Eliminate Accelerated Cost Recovery for Largest Businesses (2&8)	$760	$920
Sub-Total	**$2,970**	**$3,030**
Total	**$4,470**	**$4,970**
% of GDP	**1.6%**	**1.8%**

Sources are authors' calculations based on: (1) AEI Tax Brain; (2) JCT (2017, 2018), (3) Clausing (2019b); (4) Tax Policy Center (2019c), (5) JCT (2016); (6) JCT (2011) and Tax Policy Center (2018); (7) Auxier, Burman, Nunns, & Rohaly (2016) and Sammartino, Burman, Nunns, Rosenberg, & Rohaly (2016); Batchelder (2017a). The authors have updated all estimates to be consistent with a 2021-30 budget window, with details provided in Batchelder and Kamin (2019).

In presenting these and other revenue estimates, we use the 10-year budget window for the next Congress (2021–2030) and assume each proposal is effective immediately. (See Batchelder and Kamin, 2019, for details as to how these estimates are derived.) Where relevant, we present the revenue raised relative to both "current law" and "current policy." Under current law, many of the 2017 tax law's provisions affecting individual income taxes expire after 2025. Thus, several measures (such as increasing the top rate back to the previous top rate) raise revenue only temporarily relative to current law. By contrast, if measured relative to an alternative scenario in which the tax cuts are continued, these measures raise more. Other measures, such as limiting itemized deductions, raise more relative to current law than current policy since the tax law already contains limitations on these deductions that are scheduled to expire.

Some who support raising taxes on the wealthy think we should maintain the basic structure of the current system but reform it, such as in the ways listed above (e.g., Sarin & Summers, 2019a). As the table shows, these measures could raise $4.5 to $5 trillion over the decade, or 1.6% to 1.8% of GDP. This is, of course, a considerable amount of revenue.

However, it may be insufficient to address long-term, fiscal shortfalls if we maintain our existing spending commitments and, even more so, if we address significant needs for additional services and investments. As noted above, CBO projections suggest that, under current law, annual deficits will need to be reduced by almost 2% of GDP to stabilize the debt-to-GDP ratio over the next 3 decades. More than double this amount will be necessary if a number of current policies, such as the 2017 tax cuts and relief from the sequester, are continued (CBO, 2019). Significant additional revenues can be raised from those at the top, but it will tend to require the kinds of structural changes discussed in the next section.

All of these proposals would fall primarily on the wealthy but not all of them would exclusively burden the wealthy. For example, Treasury and the Joint Committee on Taxation (JCT) estimate that 75% to 82% of the burden of the corporate tax falls on corporate equity owners or owners of all capital, while 18% to 25% falls on labor (Cronin, Lin, Power, & Cooper, 2012; JCT, 2013; for further discussion of the incidence of the corporate tax, see Clausing, 2012; Batchelder, 2017b). More recent estimates by Treasury imply the burden on labor is only 12.5% in general and 7.5% in the case of multinational corporations (Power & Frerick, 2016). While capital and corporate equity ownership are highly concentrated among the wealthy, the bottom 99% still receive roughly half of all capital income (Cronin et al., 2012). Pass-through income is even more concentrated, and Treasury and JCT estimate that an even smaller portion of taxes on pass-through businesses fall on labor (Cronin et al., 2012; JCT, 2013). Nevertheless, the burden on labor is not zero. Thus, the proposals that would raise revenue through business taxes, which total $2.1 to $2.6 trillion, would fall very disproportionately on the wealthy, but a portion would be borne by middle-income investors and, to a much smaller degree, workers.

Further, while these reforms would address some of the problems summarized in the prior section, other problems would remain, and might even be exacerbated. Capital gains and dividends still would be taxed at much lower rates than income from labor and the differential would widen, increasing the pressure on the line between the two. Repeal of stepped-up basis would eliminate one major incentive to defer realizing gains. But large incentives to defer realizing gains would remain, including those due to the time value of money, potential future rate decreases, and the tax exemption for gains on property donated to charity.

A more robust estate tax would better address the direct effects of inherited advantage. But it would have smaller effects on many of the indirect advantages associated with wealth, such as social connections with other wealthy individuals, access to the best educational opportunities, and the like.

In addition, while all of these proposals maintain the basic structure of the current tax system to some degree, these changes are not necessarily more politically feasible than the structural reforms that are described in the following section. Whether "incremental" or "structural," there will always be strong and organized opposition to such measures, and some structural changes arguably could garner stronger public support than more incremental reforms. Thus, we distinguish between incremental and structural reforms as a way of describing the degree of substantive change in the structural underpinnings of the tax system, and not of the ease or probability of enacting such reforms.

Finally, the list in Table 1 is not definitive or comprehensive, but it is intended to contain most of the incremental steps that we know of that are estimated to raise substantial revenue. While one could surely offer some other combination of such measures, the overall revenue is likely to be in the same general range as these—roughly 1% to 2% of GDP in additional revenue.

4. Options for Structural Changes to Raise Revenues From the Wealthy

This section discusses four potential structural changes to the tax system that would raise revenue primarily from those at the top: dramatically increasing the top tax rates on labor and other ordinary income; taxing accrued gains as they arise and at ordinary rates; implementing a wealth tax; and enacting a financial transactions tax. These reforms are not mutually exclusive, and several are complementary to one another. Nonetheless, we discuss their relative advantages and disadvantages.

4.1 Dramatically Raising Top Rates on Labor and Other Ordinary Income

Over two-thirds of the reported income of the top 1% is taxed at ordinary rates.[3] As a result, dramatically increasing the top ordinary rate can generate substantial revenues.[4] Increasing the top individual rate to 70% on income over $10 million (the top 0.01% of households), as Representative Alexandra Ocasio-Cortez has suggested, would raise about $260 to $320 billion over 10 years.[5]

If the threshold were lower, such a dramatic rate increase would raise far more. To give a sense of scale, the ordinary income tax base above $1 million (the top 0.2% of households) is about six times larger than it is above $10 million. The ordinary income tax base for the current top bracket (income above $612,000 if married or $510,000 if single; the top 0.6% of households) is about nine times larger.

An alternative is to raise the top income tax rate somewhat less, and subject earnings above $250,000 to the Social Security tax. This latter proposal would raise roughly $1.4 trillion over a decade if enacted on its own, as summarized in Table 2. It would raise less if combined with a top income tax rate increase due to interaction effects.

3 Authors' calculations from Statistics of Income, Table 3, for Tax Year 2016.

4 We acknowledge that this is less of a structural reform than the others described in this section. Nevertheless, we found it helpful to discuss it here in order to compare it to the other options.

5 We have adjusted the Penn Wharton Budget Model estimates to cover the 2021–2030 period rather than an earlier budget window. This is the case with all estimates cited in this paper.

Table 2. Structural Reforms

	2021-2030 (BILLIONS)	
	CURRENT LAW	CURRENT POLICY
Significantly Raise Top Rates on Labor and Ordinary Income		
Increase top individual rate to 70% from 37% for income over $10M (1)	$260	$320
Eliminate maximum earnings threshold in Social Security tax above $250K in earnings (2)	$1,370	
Financial Transactions Tax		
0.1% tax on all financial assets (2)	$810	

	2021-2030 (BILLIONS)		
	TAX AVOIDANCE RATE		
	0%	15%	30%
Accrual Tax			
Limited to Top 1%			
Mark-to-market for publicly traded assets (3)	$2,200	$1,700	$1,400
Retrospective accrual tax for illiquid assets (3)	$600	$400	$300
Total	$2,800	$2,100	$1,700
Limited to Top 0.1%			
Mark-to-market for publicly traded assets (3)	$800	$600	$500
Retrospective accrual tax for illiquid assets (3)	$200	$150	$100
Total	$1,000	$750	$600
Wealth Tax			
2% tax on wealth for top 0.1% and 3% on wealth over $1B (3)	$3,300	$2,600	$1,900
2% tax on wealth for top 1% (3)	$6,700	$5,100	$3,500

Sources are authors' calculations based on: (1) Ricco and Prisinzano (2019) (averaging their three estimates accounting for avoidance); (2) Congressional Budget Office (2018); (3) Survey of Consumer Finance and other sources. For more details, see Batchelder and Kamin (2019).

4.1.1 Advantages

This is of course a large amount of revenue, which would be raised almost exclusively from those who are well-off. While no tax solely burdens the individuals remitting it, taxes that are directly limited to affluent individual taxpayers tend to be shifted on to others to a lesser extent than taxes that only indirectly focus on the affluent, such as corporate income taxes. Eliminating the maximum earnings threshold in the Social Security tax would also help to stabilize the Social Security trust fund by delaying its exhaustion for an additional 13 years (CBO, 2018).

There is precedent for such high individual income tax rates in the United States and abroad. Indeed, from 1936–1981, the top ordinary rate in the United States was 70% or higher (Tax Policy Center, 2019b). This approach also would not entail the valuation and liquidity challenges associated with some of the other potential structural reforms. Finally, there is at least some evidence that at high marginal tax rates, those with the highest incomes engage in less "rent-seeking" behavior, which could both reduce such wasteful activity and redistribute income down the income spectrum (Piketty, Saez, & Stantcheva, 2014). However, there are several potential downsides.

4.1.2 Potential Challenges

At high tax rates, there are greater incentives for earners to change their behavior to reduce taxes, whether through changes in real economic transactions or how income is reported. The degree of these responses depends on the underlying legal rules and the tax rates that are applied to other tax bases. Thus, broadening the tax base and harmonizing tax rates on other forms of income should be seen as an important complement to significant marginal rate increases on any given type of income.

On their own, these reforms would dramatically increase the already large difference between the tax rates on labor or ordinary income and those on capital income, including capital gains and dividend income. As a result, raising the top tax rate would substantially increase incentives for the wealthy to recharacterize labor and ordinary income as one of the other, lower-taxed categories of income. Further increasing opportunities for tax avoidance would, in turn, render the tax system less efficient, more complex, and, at least among the wealthy, less fair.

But these real downsides could be largely addressed if the taxation of capital were reformed to apply similar rates to capital gains and dividends in a manner that raised revenue, such as through the accrual-based tax system described next.

4.2 Accrual Tax

Unfortunately, if no other rules are changed, raising the rate on capital gains and dividends to the same level as ordinary income would likely lose revenues relative to some lower rates on such income, at least as estimated by the JCT and Treasury. They assume—again if no other rules are changed—that the capital gains rate that maximizes revenues is in the range of 30% because of the lock-in effect.[6] That is, above a tax rate on capital gains of roughly 30%, the Treasury would begin to lose revenues because taxpayers would respond by deferring realizing gains for much longer periods of time. Some believe the revenue-maximizing rate on capital gains is higher than the JCT and Treasury assume (Gravelle, 1991). But there are

6 Authors' calculations based on Congressional Research Service (2019).

also relatively few countries that tax long-term capital gains at rates above 30% and whose experience could therefore be used to empirically examine what the revenue-maximizing rate actually is. Notable exceptions include Austria, Chile, Denmark, Finland, Ireland, South Korea, Thailand, and Turkey, some of which tax capital gains at much higher rates than 30% (Ernst & Young, 2018).

If taxing capital gains and ordinary income at the same rates were coupled with certain other reforms, however, it would clearly raise substantial revenue. For example, the Tax Policy Center estimates that the revenue-maximizing rate rises to 50% if stepped-up basis is repealed (Rubin, 2019). It would be even higher under reforms that tax gains (and allow deductions for losses) as they accrue, rather than waiting until they are realized.[7] Nearly 40% of the wealth of the top 1% is in the form of accrued and unrealized capital gains. Moreover, the top 1% holds about half of all such unrealized gains.[8]

Taxing gains as they accrue is sometimes called a "mark-to-market" regime. Under mark-to-market, taxpayers would value all of their assets every year and either pay tax on the gain or deduct the loss. Such a system would eliminate the need for separate taxes on dividends and interest, since both would be considered part of any gain.

Given the difficulty of measuring the annual change in value of most privately held businesses and other illiquid assets, advocates of taxing gains as they accrue have generally proposed mark-to-market regimes only for publicly traded assets. But some advocate combining such an approach with a "retrospective" accrual regime for assets that are not publicly traded—which would impose tax only upon the sale of such assets but apply a deferral charge at the time of sale to minimize any benefit that had accrued from deferring tax payments on gains.

For example, suppose a wealthy investor purchases a resort for $100 million and it appreciates by $5 million each year for 10 years, at which point she sells it. Under a retrospective accrual tax, she would be taxed at the point of sale, but as if she was paying back taxes due, with interest, on her $5 million gain in each of the 10 years. Her tax liability would be higher than under our current realization-based system, which would also tax her on a $50 million gain, because of the interest charge.

This combined approach of mark-to-market for publicly traded assets and retrospective accrual taxation of all other assets has been proposed in conceptual form by Senator Ron Wyden (D-Oregon) and presidential candidate Julian Castro (Rubin, 2019; Wyden, 2019).

7 Another option is to apply higher capital gains rates as the amount of time the taxpayer holds an asset before realizing its accrued gains grows. We do not focus on this option here, but it would have similar effects.

8 Authors' calculations from Federal Reserve Board (2017).

There is vast uncertainty in estimating the revenues that would be generated by either an accrual tax regime or a wealth tax. In Batchelder and Kamin (2019), we present some preliminary estimates of both approaches. Our estimates use the 2016 Survey of Consumer Finance, one of the best sources for wealth data, and use a range of tax avoidance assumptions to give some sense of the range of uncertainty.

We first estimate a proposal that applies mark-to-market to publicly traded assets, taxes the gains on such assets as ordinary income, and makes no changes to the taxation of gains on illiquid assets. We assume the top rate on ordinary income is 39.6% plus the SECA or NIIT tax of 3.8%. As summarized in Table 2, we estimate that this proposal would raise new revenue on the order of $1.7 trillion over 10 years if it were limited to roughly the top 1% (exempting additional income from the mark-to-market system, not total income, under about $100,000), and assuming a tax avoidance rate of 15%. For all of these estimates, we also provide figures in Table 2 assuming no avoidance and 30% avoidance to give a sense of the range of possible outcomes. However, publicly traded assets represent only about one-fifth of assets held by the top 1%, excluding retirement accounts and tax-exempt debt.[9] Further, this estimate assumes there would be no change in the percentage of assets that are publicly traded, but such a regime would create vast incentives to privatize businesses and invest in other exempt assets.

Thus, we think the better approach is to apply an accrual tax to all assets but implement it only on a retrospective basis for assets that are not publicly traded. There are a number of different ways to do this, but under all of these approaches, gains on illiquid assets would only be taxed when the asset is sold. Importantly, such a retrospective regime should also treat gifts, bequests, and charitable contributions as a realization event in order to place illiquid assets on a similar footing as publicly traded assets taxed on a mark-to-market basis. Otherwise, significant tax avoidance opportunities would remain.

If a retrospective regime were applied to assets that are not publicly traded for the top 1% and also taxed gains on such assets as ordinary income, we estimate it would raise an additional $400 billion over 10 years, assuming a 15% avoidance rate. (See Batchelder and Kamin (2019) for detailed assumptions behind this estimate.[10])

Overall, we estimate an accrual tax would raise on the order of $2.1 trillion over 10 years if limited to the top 1% and assuming a 15% avoidance rate. It would raise

9 Authors' calculations based on 2016 Survey of Consumer Finance (SCF).

10 As we describe in Batchelder and Kamin (2019), our estimate for applying a retrospective accrual tax to illiquid assets also very conservatively assumes that the only revenue raised from that regime is from taxing accrued gains on illiquid assets at death.

roughly $750 billion if limited to the top 0.1% instead.[11] We should emphasize that, unlike all the other revenue estimates in this paper, these estimates and those for a wealth tax assume no behavioral response, other than that embodied in the assumed tax avoidance rate.

One key issue in estimating revenue from these proposals is how pre-enactment, built-in gains on existing assets are treated in transition. When it comes to publicly traded assets, one approach would be to impose tax at the time the regime is implemented but allow payment of that liability over some period of time. Alternatively, payment on these pre-enactment, built-in gains could wait until sale of the asset or death, whichever is earlier. Our estimates assume something along the lines of the latter regime, by adopting the very conservative assumption that all pre-enactment, built-in gains on publicly traded assets are not marked-to-market until death. Most transition rules would likely raise more within the 10-year window,[12] and we hope to explore this further in future work.

4.2.1 Advantages

There are many advantages to a system that combines mark-to-market for publicly traded assets with retrospective accrual taxation for all other assets. It would raise a large amount of revenue almost exclusively from the wealthy. It would largely eliminate the ability to reduce tax liability by changing the timing of the sale of property. And it would effectively (under mark-to-market) or actually (under retrospective accrual) repeal stepped-up basis and eliminate the ability to avoid tax on gains by donating property to charities. Further, this increase in capital taxation could not be avoided through the kinds of tax planning maneuvers that allow multinational businesses to report a large share of their profits in tax havens. Accrual taxes would be imposed at the individual level on the multinational's share price, which incorporates both domestic and foreign profits, and they would apply to all U.S. citizens, regardless of where they live. As a result, the location of profits reported by multinational enterprises—and the residence of the multinationals themselves—would be irrelevant for U.S. tax purposes.

11 Some have suggested applying a retrospective accrual regime to both publicly traded and non-publicly-traded assets (Grubert & Altshuler, 2016; Shakow, 1986). This would ensure that gains on publicly traded and non-publicly traded assets were taxed identically. This would certainly be an improvement over the current system, but it would not eliminate one reason that asset holders might defer gains: waiting for a reduction in rates or repeal of the retrospective regime. As a result, we view a combined system as a better approach. There is also a question of whether and how such regimes should be integrated with corporate income taxes. If gains and dividends on corporate stock are taxed at the individual level at ordinary rates and with no benefit to deferral, there is a logic to providing a credit at the individual level for taxes the corporation paid on its income (Grubert & Altshuler, 2016; Toder & Viard, 2016b). However, that logic breaks down if the mark-to-market regime is applied only to the very top of the income distribution, rather than more comprehensively. Thus, there may be a trade-off between comprehensive reform that integrates corporate- and individual-level taxes and limiting tax increases at the individual level to the very top.

12 Specifically, we incorporate the effect of the built-in gain through existing estimates of the revenue raised from taxing accrued gains at death over the next decade. This is also our approach to the revenue from taxation of illiquid assets. See Batchelder and Kamin (2019).

For all these reasons, the revenue-maximizing capital gains rate would increase dramatically under an accrual tax system. Policymakers could then generate substantial revenues by increasing capital gains rates. By reducing or eliminating differences in the effective tax rates on ordinary income, capital gains, and dividends on a present value basis, policymakers could in turn eliminate or reduce many of the largest tax planning opportunities within our current system. Tax avoidance, with its accompanying fairness and efficiency costs, would decline.

The proposal would also be highly countercyclical, increasing the extent to which the federal fiscal system automatically stabilizes the macroeconomy. This is because accrual tax revenues and liabilities would more closely follow annual returns in the financial markets—swinging more widely from year-to-year—than under the current realization-based system.

Finally, there is substantial precedent in the United States for taxing gains as they accrue. Our current system taxes some securities (e.g., straddles) on a mark-to-market basis, and applies a retrospective accrual tax to some passive income earned in foreign corporations held by U.S. residents (so-called PFICs). Even more notably, we effectively apply an accrual tax approach to debt instruments through the original issue discount rules.

4.2.2 Potential Challenges

There are, however, a number of challenges associated with an accrual tax, some of which are substantial.

First, there would be additional administrative and compliance costs involved in reporting income on publicly traded assets on an annual basis based on changes in market values. That said, automated reporting by financial institutions could shield investors from much of this complexity.

Second, the heightened volatility of revenues under a mark-to-market regime is a double-edged sword. On the one hand, it would increase the extent to which federal fiscal policy automatically stabilizes the macroeconomy. On the other hand, if state governments also adopt the same regime (and many do piggyback off the federal tax system), it could increase the extent to which state policy magnifies economic cycles, by forcing states to cut spending during recessions in order to comply with their balanced budget rules. However, Toder and Viard (2016b) show this concern could be largely addressed by averaging the tax due over time. In addition, some states would receive an offsetting benefit: Accrual taxation would reduce the tendency of taxpayers in high-tax states to change their residence shortly before realizing large gains.

Third, restricting such a regime to the very wealthy would be relatively complicated compared to the wealth tax discussed next. One option would be to apply the regime universally and adjust tax rates to offset any undesired tax increase on average for

those below the very top. This would simplify the regime and allow relatively easy integration with the corporate tax system as everyone could receive credits for any corporate income taxes paid. But there would be no way to hold all those below a certain threshold harmless under this approach. While one could make sure that those in, for example, the bottom 99% do not face a tax increase on average (or even receive a tax cut), those with more capital holdings within this group would still tend to face tax increases. In addition, even if no one in this group faced a tax increase, they still might object to the complexity of complying with an accrual tax system.

Another option would be for policymakers to exempt taxpayers below a certain income or wealth threshold. But it is unclear how to treat taxpayers once they exceed the selected threshold. If taxpayers were then fully and permanently subject to the accrual tax, this cliff would create enormous incentives to stay below the threshold, potentially generating large economic distortions. Alternatively, policymakers could use some method to phase in the effects of the accrual tax regime.[13]

Fourth, the retrospective component of a partially retrospective accrual tax would necessarily be imprecise. Gains on assets do not accrue at a constant rate over time. Any deferral charge would necessarily be a rough approximation of the actual value of deferral to a specific taxpayer. Tax rates also change over time. Thus, while the retrospective component of the system would address valuation and liquidity concerns regarding illiquid assets, it would maintain some existing tax avoidance opportunities, while also introducing some new ones.[14] But we should emphasize that these tax avoidance incentives, while meaningful, would generally be far smaller than under our current, realization-based system.

Finally, while there is substantial precedent in the United States for applying an accrual tax to some assets, no country taxes all assets on an accrual basis, even if restricted to the rich. Any time a new approach to taxation is enacted for a larger group of assets, there are inevitably unforeseen difficulties and unintended avoidance opportunities that can only be addressed gradually over time.

4.3 Wealth Tax

Another option for taxing the wealthy is to implement a new tax on wealth that is separate from our federal income, payroll, and wealth transfer tax systems.

13 See Batchelder and Kamin (2019) for a discussion of the trade-offs of each of these approaches.

14 For example, taxpayers holding assets that initially appreciate rapidly and then appreciate more slowly would have an incentive to hold such assets so that the appreciation was deemed to occur more gradually over time. As under current law, taxpayers who expect rates to fall would be incentivized to hold in order to take advantage of a future relatively low rate (Kamin & Oh, 2019; Hemel, 2019). Taxpayers with access to high-return investments might prefer the retrospective treatment to mark-to-market, and therefore would have an incentive to invest in privately held firms, not those that are publicly traded.

For instance, Senator Elizabeth Warren (D-Massachusetts) has proposed a 2% annual tax on net worth over $50 million—or the top 0.1%—and a 3% tax on net worth over $1 billion (Warren, 2019). The tax would apply to both domestic and foreign assets of U.S. citizens. To address incentives to expatriate, the proposal would also substantially increase the U.S. exit tax on Americans renouncing their citizenship. Senator Bernie Sanders (I-Vermont) has proposed a wealth tax with rates starting at 1% on net worth over $32 million and rising to 8% on net worth over $10 billion (Sanders, 2019).

There is considerable debate as to just how much revenue would be raised from a wealth tax. Saez and Zucman (2019a) estimate Warren's proposal would raise $2.75 trillion over 10 years (from 2019–2028), assuming a 15% avoidance rate. For purposes of consistency with our mark-to-market estimates, we have done a similar calculation using only the Survey of Consumer Finance (they average it with another data source) and assume the same 15% avoidance rate. Under these assumptions, we estimate the Warren proposal would raise about $2.6 trillion over 10 years (from 2021–2030). If a wealth tax instead was 2% and limited to the top 1% of wealth holders (net worth over about $10 million), we estimate it would raise about $5.2 trillion over 10 years, again assuming a 15% avoidance rate. As with the accrual tax (and unlike the other revenue estimates in this paper), these estimates assume no behavioral response other than that embodied in the tax avoidance rate.

Some experts have criticized the Saez and Zucman (2019) estimate as too high, taking issue with their data sources, methodology, or judgments about how Warren's proposal would change as it made its way through the legislative and regulatory process (e.g., Smith, Zidar, & Zwick, 2019; Summers & Sarin, 2019; Sarin & Summers, 2019b). We discuss this ongoing debate in more detail in Batchelder and Kamin (2019). In light of this debate, and recognizing that there is substantial uncertainty about tax avoidance responses, we provide estimates assuming higher and lower tax avoidance rates. For instance, as summarized in Table 2, if there were 30% avoidance, the Warren proposal would raise approximately $2.0 trillion from 2021–2030.

We should also emphasize that considerable uncertainty exists regarding the total magnitude of wealth in the United States. This is not just a question of avoidance, but of what the levels of wealth are before such avoidance takes place. Different sources tend to show different levels and composition of wealth (e.g., Kopczuk, 2015; Bricker, Krimmel, Henriques, & Sabelhous, 2016; Saez & Zucman, 2016; Saez & Zucman, 2019c). Future research may shed additional light, as would of course the actual experience of a wealth tax in the United States if it were enacted and enforced.

4.3.1 Advantages

There are a number of advantages to a wealth tax on the most affluent. Wealth taxes can raise a large amount of revenue almost exclusively from the wealthy. Saez and Zucman (2019b) estimate that all of the revenue raised by Warren's proposal would

be paid by the top 0.1% of households ranked by wealth. Ranked by income, 97% of the revenue would be paid by the top 1%. As with the personal income tax, relatively little of the burden should be shifted to other taxpayers, in part because the tax is based directly on the taxpayer's wealth.

It is far easier to administer and comply with an exemption from a wealth tax than from an accrual tax. Wealth below the exemption is simply not taxed. Under an accrual tax (or at least one that avoids cliff effects), gains below the exemption are taxed on a realization basis, meaning the wealthy would probably need to comply with two different regimes with respect to each asset held.

Relative to raising ordinary rates and an FTT, a wealth tax would reduce deferral and lock-in incentives. While it would not change deferral incentives under the income tax, it would add an element of taxing capital that is not realization-based. As such, it could not be avoided by simply deferring gain and holding on to underperforming assets.

Like an accrual tax, a wealth tax could not be avoided through multinational businesses that shift reported profits (or actual economic activity) to low-tax foreign jurisdictions because it would effectively apply to the foreign profits of (U.S.- and foreign-resident) multinationals held by U.S. citizens.

In addition, a wealth tax may have a broader base than the alternatives, reducing tax avoidance opportunities and efficiency costs. It would definitely have a broader base than a financial transactions tax, which is limited to financial assets. But the relative breadth of its base compared to an accrual tax is largely a political economy question. Arguably it would be easier to include some assets in a wealth tax base. Theoretically, an accrual tax could apply to qualified retirement accounts, tax-exempt bonds, primary residences, and charitable transfers over which the donor retains some control. But this would be very challenging politically under an accrual tax because it builds on the income tax system, which currently exempts all or most returns on such assets from taxation. While including such assets in the base of a wealth tax would also be politically challenging, it might be somewhat easier because a wealth tax would be writing on a blank slate. With that said, these three categories comprise less than one-fifth of the wealth of the top 1% according to the Survey of Consumer Finance.[15]

If it is correct that it would be easier politically to apply a broad base to a wealth tax than an accrual tax, this would be a significant advantage. Either approach can result in extensive gaming if certain categories of assets are carved out or treated preferentially. For example, the Spanish wealth tax exempted some forms of closely held businesses and, over a short period of time, the exempted stock as a share of all closely held business stock grew from 15% to 77% (Alvaredo & Saez, 2009). This

15 Authors' calculations based on Federal Reserve Board (2017).

relates to a further advantage: A number of other countries have enacted wealth taxes, providing precedents from which the United States could learn.

Finally, adding wealth as a separate tax base would arguably increase the fairness of the tax system as a whole. Tax fairness depends in part on how accurately the system distributes tax burdens based on how well-off taxpayers are. This raises the question of what is the best measure of being "well-off." Income and consumption are excellent measures, but need not be the only ones. Wealth may provide additional information about well-being if, for example, it independently provides insurance against risks, access to better information, or political power. Empirically, wealth is also a powerful indicator of advantage, including inherited advantage, controlling for a variety of factors such as income and earnings (e.g., Hajat, Kaufman, Rose, Siddiqi, & Thomas, 2011; Jez, 2014; Boserup, Kopczuk, & Kreiner, 2016; Hotz, Wiemers, Rasmussen, & Koegel, 2018).

Despite these large, independent effects of wealth on well-being, our current tax system is regressive when measured by wealth, at least when one excludes human capital. Saez and Zucman (2019a) estimate that the bottom 99% of households pay about 7.2% of their wealth in federal, state, and local taxes, while the top 0.1% pay only 3.2%.

An accrual tax would reduce the regressivity of the current tax system by wealth, but not as effectively as a wealth tax. Accrual taxes apply heavier taxes to individuals whose wealth is appreciating rapidly, for example, entrepreneurs. They tax more lightly those whose wealth is growing slowly, such an heir to a large fortune who invests their portfolio conservatively.

While the U.S. wealth transfer taxes do tax wealth, they do not sufficiently address these fairness concerns either. Wealth transfer taxes are imposed only once per generation and do not apply to a large share of wealth that arguably should be counted when measuring relative affluence. Examples include wealth consumed during life or eventually given to family foundations or donor advised funds over which the donor maintains significant control. Wealth transfer taxes also do not apply to wealth transferred to heirs in exempt forms, such as paying for the private education of one's descendants perpetually. In addition, even though the burden of wealth transfer taxes largely falls on the heirs of large fortunes and not decedents, they only partially correct for the fact that inherited income is tax-exempt under the income tax (Batchelder & Khitratakun, 2008). We tend to think U.S. wealth transfer taxes tax should be significantly strengthened and potentially replaced with an inheritance tax as proposed by Batchelder (2009). But even if it were, important arguments for a wealth tax would remain.

Furthermore (and relevant to debates about how much a wealth tax would raise), estate taxes are inherently more prone to avoidance than wealth taxes because they apply only at one point in time per generation. A variety of estate tax avoidance

strategies involve temporarily and artificially deflating the value of transferred assets at the point in time that the wealth transfer is deemed to occur—and therefore valued—for tax purposes (for a more detailed discussion and reform proposals, see Dodge, 2016; Batchelder & Kamin, 2019). The wealthy should be far less inclined to engage in such strategies under a wealth tax because doing so would entail ongoing—not temporary—restrictions on their powers over, and access to, their assets. In addition, assuming their heirs are also wealthy, any temporarily undervalued gifts and bequests would quickly be included at their correct value in the wealth tax base. The estate and gift taxes could only reach such temporarily undervalued wealth much later—if and when the heirs eventually transfer their inheritances to their children.

4.3.2 Potential Challenges

Despite these advantages, there are a number of potential objections to, or challenges associated with, a wealth tax.

Some object that a well-functioning income tax is a more efficient and fair way to tax the rich. Unlike an accrual tax and eliminating stepped-up basis, a wealth tax would not raise the revenue-maximizing capital gains rate. As a result, it would not eliminate barriers to equalizing the ordinary and capital gains rates, with all the attendant benefits of reducing tax avoidance and thereby increasing fairness and efficiency.

In addition, going forward, a wealth tax imposes a greater effective burden on the "normal" return to capital and less on rents (e.g., Kopczuk & Schrager, 2014). For instance, imagine two individuals save $100 million but one earns a 5% "normal" return and the other earns a 15% return—with 10 percentage points of that return reflecting "rents." Under a 2% wealth tax (and ignoring any exemption), each would pay $2 million in taxes. The implicit income tax rate on the "normal" return would be 40%, while the implicit income tax rate on the "rents" would be zero. By contrast, an income tax could be set at a 20% rate to generate the same revenue, since it would also tax the above-market rate of return. It would tax the "normal" return and the "rents" at the same rate. In this way, an income tax would impose a greater burden on rents and less of a burden on the normal return as compared to a wealth tax generating the same revenue.

In some respects, the concern that a wealth tax would tax "normal" returns and rents at different rates is simply a way of saying that one believes income is a better measure of well-being than wealth. But there is another concern. If, as some economists believe, saving and investment decisions depend on the after-tax "normal" rate of return and not rents, a wealth tax would tend to generate greater distortions to such decisions than an equivalent income tax (e.g., U.S. Department of Treasury, 1977; President's Advisory Panel on Tax Reform, 2005). But there is mixed evidence on the extent to which aggregate savings and investment is influenced by taxes at all (e.g., Elmendorf, 1996; Laitner & Juster, 1996; Dynan, Skinner, & Zeldes, 2002; Kopczuk

& Lupton, 2007) and, if so, whether it responds more to taxes on "normal" returns or rents (e.g., Batchelder, 2017b). Moreover, a wealth tax may encourage people to deploy their capital more productively by taxing low return assets at the same rate as those earning high returns (Guvenen et al., 2019).

A second potential concern with a wealth tax is liquidity. Because a wealth tax applies regardless of whether one's assets are liquid or producing any income in the current year, it could create serious challenges if applied to middle-income households. This is a frequent objection to state-level property taxes and has driven many of the preferences and exemptions for certain categories of assets in the wealth taxes of other countries. But, if limited to the very wealthy, this concern has much less force. The wealthy can borrow against assets relatively easily and quickly. One oft-cited example is the $10 billion line of credit obtained by Oracle CEO Larry Ellison in 2014 (Thornton & Hendricks, 2019). It is possible that some minority owners of early-stage businesses could face liquidity challenges. These challenges would be heightened if the business obtains a very high valuation initially and subsequently fails. But by the time such taxpayers are worth $50 million, this seems unlikely. Moreover, a wealth tax could permit taxpayers to defer paying any tax due for several years with interest, as Warren has proposed. It could also allow taxpayers to average their wealth over several years to address situations where a taxpayer's net worth briefly exceeds the threshold before returning to a level well below it.

Relative to the alternatives discussed thus far, a more serious drawback is that a wealth tax would create significant valuation challenges. According to the best available data, private businesses comprise up to half of the holdings of individuals whose net worth exceeds $50 million (IRS, 2018; authors' calculations based on 2016 Survey of Consumer Finances, 2017). Wealthy individuals and the Internal Revenue Service (IRS) already often have to value private businesses and other hard-to-value assets without a market transaction. In the tax context, they do so for estate and gift taxes, or when claiming the charitable contribution deduction. In non-tax contexts, many large private businesses are valued on secondary markets (though frequently at a discount), and as part of mergers and acquisitions, obtaining venture capital funding, or issuing shares. Smaller businesses and assets like art are often valued as part of divorces, bankruptcies, or obtaining loans or insurance. But a wealth tax would require such valuations far more frequently. This could result in substantial tax avoidance, given the greater resources the wealthy can devote to valuation experts and litigation than the IRS. It could also create a large incentive to invest in private businesses, potentially reducing market transparency and liquidity.

The experience of other countries and recent empirical work provides grounds for hope that these valuation challenges could be effectively addressed. Several other countries use rules of thumb for valuing private businesses, such as the book value of assets plus a multiple of profits or sales (McDonnell, 2013; OECD, 2018). Smith, Zidar, and Zwick (2019) have recently developed and applied a detailed, industry-specific formula for estimating the value of private businesses held by the wealthy in

the United States. Wealth tax legislation or regulations could require these valuation formulas, or offer them as a safe harbor, while allowing taxpayers to prove a different value. Gamage (2019) supports relying exclusively on requiring valuation formulas in most cases in order to limit gaming. But it is also possible that any such formulas would not put private and publicly traded businesses on an equal footing once political economy considerations are taken into account.

This raises a more general concern: the potential for tax avoidance and evasion under a wealth tax. The number of OECD countries with a wealth tax has declined substantially over time, from 12 in 1990 to six today (Bunn, 2019; OECD, 2018). Some attribute the repeal of wealth taxes in these jurisdictions to excessive avoidance and evasion; others to their relatively narrow tax bases, which made them not worth the costs of administration; and still others to their relatively low exemptions, which generated political opposition (Saez & Zucman, 2019c; OECD 2018; Viard, 2019). Some wealth tax avoidance techniques would not transfer to the U.S. context. For example, some taxpayers avoided European wealth taxes by moving to other countries (Kleven, Landais, & Saez, 2013). But the United States, unlike every country that has implemented a wealth tax, taxes its citizens regardless of where they reside. The only way Americans can escape U.S. taxation is by giving up their U.S. citizenship, and even then the United States imposes a stiff exit tax, which Warren proposes to increase.

Relative to other options for raising a comparable amount of revenue from the very wealthy, it is unclear whether a wealth tax would entail more severe tax avoidance and evasion. The repealed European wealth taxes included a variety of exemptions for specific categories of assets, which facilitated avoidance and evasion, sometimes dramatically (OECD, 2018; Leiserson, McGrew, & Kopparam, 2019). There is a real risk that the United States would enact similar, asset-based exemptions and preferences as a wealth tax made its way through the political process.

On the other hand, as discussed, the risk of such exemptions and preferences may be lower under a wealth tax than under options using existing tax instruments as a matter of political economy. The U.S. income and wealth transfer taxes already have extensive and well-entrenched preferences for certain types of assets. By writing on a blank slate, a wealth tax might be able to avoid such preferences and reach forms of wealth that the United States has traditionally found politically challenging to tax, such as private foundations over which the donor maintains control.

Effectively enforcing a wealth tax would require substantial new enforcement resources for the IRS, and an expansion to our information reporting agreements with other countries. The United States already receives information on the foreign financial accounts of U.S. citizens in 113 countries under the FATCA regime and its successors (U.S. Department of the Treasury, 2019a). But the IRS currently lacks the resources to effectively use this data. While our existing information exchange agreements largely focus on financial assets, the OECD-led Common Reporting

Standard (CRS) covers non-financial assets, including trusts, and has over 100 signatories. The United States has not signed on to the CRS, but we nevertheless obtain information reported under it from other countries (Schneidman, 2019; OECD, 2019b).

Finally, a wealth tax could be struck down as unconstitutional on the grounds that it is a "direct tax," which must be apportioned among the states on the basis of population under Article I, Section 9. We think a wealth tax is not a "direct tax" as a matter of law, and should therefore be upheld as constitutional (see, for example, Johnsen & Dellinger, 2018; Ackerman et al., 2019; Johnsen et al., 2019; Feldman, 2019; for a contrary view see Freeman, 2019; Khan, 2019). But the Supreme Court as currently constituted may nevertheless disagree.

What is clear is that any legal risk associated with enacting a wealth tax could be reduced if it were understood as a refinement to the income tax. For example, a wealth tax could be understood as a tax on imputed income from wealth (Cunningham & Schenk, 1992; Schenk, 2000; Gamage, 2019). This would follow the model of the Dutch dual income tax, which taxes the capital income of some assets based on an imputed return, not realized income (Cnossen & Bovenberg, 2001), and the former Columbian wealth tax, which was treated as a minimum income tax (Saez & Zucman, 2019c). Or it could be structured as an adjustment to marginal income tax rates based on wealth, much as we adjust marginal income tax rates based on family structure, age, the presence of capital income, and innumerable other factors (Glogower, 2019). Yet another possibility is to design a new tax that is a hybrid of an accrual and a wealth tax, perhaps using the wealth tax as a withholding mechanism or safe harbor under an accrual-based income tax.

While some suggest that the Supreme Court as currently constituted might also strike down a mark-to-market tax on capital gains, this seems far less likely. The constitutionality of the income tax is enshrined in the 16th Amendment. One Supreme Court case (*Eisner v. Macomber,* 1920), struck down application of the income tax where there was no realization. But it has been dramatically scaled back and essentially limited it to its facts. Virtually all commentators now agree the realization requirement is a mere administrative convenience and not constitutionally required (e.g., Hurley, 2008; Kornhauser, 2009; Toder & Viard, 2016a). Moreover, lower courts have declined to overturn several long-standing provisions that tax income on a mark-to-market basis, rather than when it is realized.[16] Finally, any dubious arguments against the constitutionality of a mark-to-market tax do not apply to a retrospective accrual tax, which would only tax gains upon realization.

16 For examples, see Miller appendix in Toder & Viard, 2016a.

4.4 Financial Transactions Tax

A financial transactions tax (FTT) applies a tax to the sale of financial assets. An FTT is best viewed as a sales tax on securities. But it could also be viewed as combining elements of income and wealth taxation. Like the current income tax, an FTT is prompted by exchange of an asset. However, unlike the income tax, it is not imposed on the gain on the asset, but rather on the full value of the asset at that point—like in a wealth tax, though potentially multiple times per year. Unlike both, it is restricted to financial assets.

One FTT option outlined by the CBO is to apply a 10-basis-point (0.1%) tax to sales of stocks and debt obligations, and to payments made under derivative contracts (CBO, 2018). Transactions by foreigners on U.S. markets would be taxed, as would offshore trades by U.S. taxpayers. The tax would not apply to the initial issuance of stock or debt obligations, or to currency transactions or transactions involving short-term debt obligations. Extrapolating from CBO estimates, this option would raise about $810 billion over a decade (CBO, 2018). Like several of the other structural changes discussed above, revenue estimates of such a large-scale FTT are relatively uncertain and depend significantly on assumed effects on trading volume.

4.4.1 Advantages

As with the other progressive, structural changes discussed here, an FTT could raise substantial revenue primarily from the wealthy. However, an FTT also has some advantages as compared to these options.

Unlike any of them, a meaningful portion of the burden would fall on foreigners, which could be viewed as an advantage from a U.S. perspective. About 20% of U.S. long-term securities are held by foreign persons (U.S. Department of Treasury, 2019). Unlike a wealth tax, valuation is not a major barrier because the tax is imposed as the asset changes hands, often for cash. There should be no constitutional risk as the federal government's power to tax transactions is well established. Unlike an accrual tax, an FTT seems relatively simple to understand.

There are already precedents for an FTT in the United States and other countries. The United States imposes a very small FTT to fund securities enforcement. Several other countries, including major trading centers like the United Kingdom and Hong Kong, impose much larger FTTs (Burman et al., 2016). These precedents provide lessons learned for the effective design of an FTT and reassurance that market disruptions would not be too severe.

Some also argue that an FTT would be a relatively efficient way to raise revenue from the wealthy (e.g., Baker, 2016). Overall, there is a compelling case that dynamics in the financial sector tend to lead to too much trading—trading where social costs exceed social benefits (Summers & Summers, 1989). One example is the extraordinarily large investments traders make in high-speed trading platforms and related infrastructure

to beat out other traders in reacting to new information, all in pursuit of zero-sum gains (e.g., Budish, Cramton, & Shim, 2015; Baker & Gruley, 2019). Whether or not a broad FTT is the best response to these problems is a more difficult question. There are alternative tools that may more accurately target some of the significant failures in the markets for financial assets and reduce such wasteful behavior as high-frequency trading (Budish, Cramton, & Shim, 2015). But to the extent an FTT affects trading volume taking the form of these rent-seeking and speculative activities, it could curb the disruptive effects of such activities (e.g., the 2010 "flash crash"), while entailing relatively few efficiency costs.

4.4.2 Potential Challenges

Taking the other view, some are concerned that an FTT would have such large effects on trading volume that it would reduce liquidity, increase market volatility, and inhibit price discovery (Matheson, 2012; Habermeir & Kirlenko 2003).

An FTT is likely to reduce trading volume substantially (see Matheson, 2012 and Burman et al., 2016 for reviews). As a result, a broad FTT may impede some transactions whose benefits outweigh costs, but the key empirical question is how large such an effect would be (Matheson, 2011). This particular issue is not a concern for the other structural reforms discussed above because the present value of tax liability is not affected by the frequency of transactions. With that said, one estimate suggests that more than 50% of daily volume in the U.S. equities markets is driven by high-frequency traders (Meyer, Bullock, & Rennison, 2018). As a result, even a large decline in trading volume may not cut all that much into the "true" market liquidity that leads to price discovery for regular market participants.

Another drawback of an FTT is that the maximum amount it could raise is probably lower than the other options. Burman et al. (2016) estimate that an FTT would start losing revenue if the rate was over 0.34%, and this revenue-maximizing rate would raise only 17% more revenue than an FTT of 0.1%.

In addition, an FTT may not be as progressive as some of the other options, even though it would be highly progressive. There is some debate about whether the burden of an FTT would fall on all owners of capital by increasing financial asset prices with other asset prices adjusting, or just on the financial sector by reducing rents in that sector (for further discussion, see Burman et al., 2016; Baker, 2016). Either way, an FTT would differ from the other structural changes discussed because its statutory incidence would not fall exclusively on the wealthy, and its economic incidence might fall more on households below the top 99%. It would, however, still be highly progressive. For example, Burman et al. (2016) estimate that about two-thirds of the economic incidence would fall on the top 1% in the short run, and 40% on them in the long run. Once behavioral responses are taken into account, they argue the distributional effects would be even more progressive.

An FTT also could render the tax system less fair among the very wealthy. It would not directly burden very affluent individuals who trade their wealth rarely, if at all. For example, a billionaire whose wealth is almost exclusively held in stock of the company she founded wouldn't owe any FTT on that wealth or its accrued gains until the point of sale, at which point there would be no deferral charge. Thus, her tax liability would be much lower than an individual with comparable income and wealth who trades her assets more frequently. A wealth or accrual tax would not entail this type of inequity.

Despite the models from other countries, there are several serious challenges in designing an FTT. In order to preserve liquidity, an FTT should probably include an exemption for market makers. Market makers are firms that stand ready to buy and sell a particular security on a regular and continuous basis at a publicly quoted price. But defining when a firm is acting as a market maker would be challenging.

Any FTT should also be designed not to drive up the prices on certain products too much because of cascading effects. For example, if an FTT applied to short-term Treasuries, it could inhibit their use for cash management because they have relatively low returns and are traded frequently. Again, determining where to draw the line on which securities should be exempt or eligible for lower rates would be difficult.

Further, the tax would have to be designed to address key avoidance techniques—including off-shoring of transactions and shifting across financial instruments. One key concern with an FTT is that it might drive transactions offshore. The tax should be designed to apply tax to any transaction involving a U.S. national (whether an entity or individual) and irrespective of whether the transaction occurs offshore. However, that would require the government collecting information on such offshore transactions, including when U.S. nationals disguise their transactions behind foreign corporations in which they are owners. One way to further expand the base to make it even harder to avoid an FTT would be to also apply it to any financial instrument issued by a U.S. company, irrespective of where it is traded and the nationality of the traders. The tax should also be applied across all types of securities to avoid shifting, but there may be no way to design an FTT that can't be avoided at least to some degree by shifting across financial instruments.

A final and related drawback of an FTT stems from political economy considerations. An FTT would require highly technical rules and—to a greater extent than the other options—its burdens would be narrowly concentrated on a well-organized and highly resourced industry. This is a recipe for vociferous lobbying at both the legislative and regulatory stages (Mashaw, 1997; Kalaitzake, 2017). Absent sophisticated and well-resourced government actors and civil society groups, the net result could be a very watered down FTT that is easily avoided and raises relatively little revenue.

5. Conclusion

This paper has outlined policy options for raising a large amount of revenues primarily from the most affluent, including incremental approaches and four more structural changes: dramatically increasing the top tax rates on labor and other ordinary income; effectively taxing the wealthy on accrued gains as they arise and at ordinary rates; a wealth tax on high-net-worth individuals; and a financial transactions tax. It generally concludes that they all merit serious consideration and several are important complements to each other. For example, a dramatic increase in the top rates on labor and other income would function best if coupled with a partially retrospective accrual tax that taxes gains at higher rates. In practice, however, their relative strengths will turn to a large extent on how each is designed after it has made its way through the legislative and regulatory process.

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