

Capital Gains Withholding

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January 2021

Abstract

Capital gains income currently escapes taxation for decades and often forever, as the wealthy wait to sell their stock and other assets. We propose capital gains tax withholding as a friendly amendment to existing reform proposals. Under withholding, the very wealthy – the 0.05% with wealth above \$50 million – would have to prepay capital gains taxes over a ten-year period. Illiquid entrepreneurs could prepay their cash taxes using a no-risk government loan. Withheld amounts would be credited toward standard capital gains taxes due upon asset sale so that there is no double tax. Withholding improves mark-to-market proposals because valuation uncertainty and price swings do not impact ultimate tax liability under withholding and because illiquid taxpayers can pay cash taxes without liquidation. Withholding complements realization-at-death proposals because withholding generates large revenue from the living, so a future Congress cannot spare the wealthy without giving them obscenely large refunds. An analysis by the Penn Wharton Budget Model estimates that capital gains withholding would enable Congress to raise \$2 trillion over the years 2021-2030 even without raising capital gains tax rates.

¹ We thank Alan Auerbach, David Gamage, David Kamin, Greg Leiserson, Zach Liscow, Darien Shanske, Joel Slemrod, and numerous conference participants for helpful discussions and comments. Funding from the Center for Equitable Growth and the Stone Center at UC Berkeley is thankfully acknowledged. This document develops an idea briefly mentioned in Saez, Emmanuel and Gabriel Zucman. 2019. “Progressive Wealth Taxation”, Brookings Papers on Economic Activity. Gamage, David and Darien Shanske. “States Should Consider Partial Wealth Tax Reforms”, Tax Notes 96(7), May 18, 2020 consider a one-time version of the annual tax we propose here in the state context. This proposal solely reflects the authors’ views and not those who generously commented on it.

1 The Need for Capital Gains Withholding

We begin by describing the need for capital gains withholding. Ambitious new programs will likely require trillions in new government revenue from the wealthy in order to pass Congress. Capital gains are an untapped revenue opportunity: the super wealthy (families with net worth in excess of \$50 million) currently hold \$8 trillion in unrealized (untaxed) capital gains. Tax withholding on extreme capital gains, along with realization at gift and death, holds the greatest promise for raising capital gains revenue from the wealthy.

1.1 Ambitious New Programs May Require Trillions in New Revenue from the Wealthy

Ambitious new programs may require trillions in new tax revenue from the wealthy in order to pass Congress. A healthcare public option, universal early learning and childcare, racial justice investments, tax credit expansions, affordable college and Title I expansion, and climate change mobilization can *each* cost on the order of one trillion dollars over ten years. Congressional passage may require trillions in tax revenue to offset those costs.

There is substantial tax revenue to be raised from the wealthy via corporate tax reform, estate and gift tax reform, better IRS enforcement of corporations and the wealthy, and millionaire income surtaxes. However, those revenue sources may not be sufficient. For example, a 10-percentage-point surcharge on incomes over \$2M raises \$650B over ten years: a large and valuable sum but insufficient to fully fund multiple ambitious new programs.²

Additional revenue requires tackling low tax rates on capital gains. Vice President Biden has pledged to raise the top capital gains tax rate from 20% to 39.6% and to “close the loopholes that allow the super wealthy to avoid taxes on capital gains altogether.” Senator Ron Wyden of Oregon has proposed a specific “mark-to-market” plan to close those loopholes. Our withholding proposal builds on these pledges to provide a novel method of implementation.

1.2 Capital Gains Deferral Allows the Wealthy to Pay Low Taxes

Capital gains taxation is based on realization and hence can be deferred by postponing realizations. Currently, capital gains held until death can entirely avoid taxation because they benefit from step-up of basis at death. If step-up of basis is abolished (as proposed by the Biden campaign), deferral can still happen across generations. Such deferral creates both tax injustice and inefficient distortions.

It creates tax injustice because the wealthiest can escape or postpone taxation. As a result, the effective tax rate (relative to true income) falls at the very top. For the very richest Americans, capital gains on wealth is the dominant form of income. Essentially all the wealth of the very richest Americans such as Jeff Bezos is in the form of unrealized capital gains. As Amazon pays very little corporate income tax and does not pay dividends to shareholders, as long as Jeff Bezos does not sell Amazon shares, his reported income and hence his individual income tax bill is minuscule relative to his true economic income (his share of Amazon profits). Saez and Zucman (2019) estimate that the effective tax rate on billionaires combining all taxes and relative to their true economic income is only 23% in 2018 (while it is 28% economy wide).

It creates inefficient distortions because taxpayers postpone realizations to avoid the tax (lock-in effect). There is a wide literature showing that realized capital gains are very sensitive to the tax rate at least in the short-term due to retiming to take advantage of lower rates (see e.g., Auerbach 1988, Saez 2017).

² <https://americansfortaxfairness.org/wp-content/uploads/Explanation-of-TPC-Surtax-Revenue-Estimate-10.15.19.pdf>

Simply increasing the tax rate on capital gains is not a good solution because the current realization-based tax is easy to avoid by retiming capital gains realizations. This is why official government agency scorers assume that the revenue maximizing tax rate on capital gains realizations is only 27% (Agersnap and Zidar 2020, Gravelle 2020).³ Therefore any comprehensive solution needs to start taxing capital gains before realization.

1.3 The Super Wealthy Hold \$18 Trillion in Unrealized Capital Gains

In the US, there are two main sources of data on the stock of unrealized capital gains that are summarized in Table 1.

First, US Treasury (2014) reports statistics from the 2010 estate tax (that required reporting both basis and fair market value of assets).⁴ It shows that about 44% of top estates (in excess of \$20m) are in unrealized capital gains (Table 2, p. 10). Furthermore, in this \$20m+ top estate group, unrealized capital gains are distributed as follows: 30% from publicly traded stock, 36% from private stock, 15% from business assets (partnerships, farms, depletable/intangibles, and sole proprietorships), 14% from real estate (only 2% of which is main residence), 3% from art and collectibles, and 2% other (primarily fixed claim assets). Hence, 81% is in business shares (corporate or non-corporate) and only 32% is in assets with markets (publicly traded stocks, and fixed claim assets). Panel B in Table 1 gathers these statistics.

Second, the Survey of Consumer Finance (SCF) data also reports basis and market value of assets. Aging the most recent 2019 SCF to 2020 and combining it with the Forbes billionaire list (as of August 13, 2020), we find that households with more than \$50m in wealth, capital gains are 50% of wealth. Furthermore, about 90% of capital gains is in business shares but only 25% of gains are in publicly traded corporate stock. The remaining 10% of gains are in real estate. The SCF data also shows that capital gains are even higher (54%) for wealthier households with net worth above \$100m. Panel B in Table 1 gathers these statistics.

The SCF data (combined with Forbes data) also show that unrealized capital gains are huge in aggregate (\$33.5 trillion in 2020, 160% of US GDP) and highly concentrated: over 50% of all capital gains belong to the top 1% wealthiest families (families with net worth above \$10m), and 25% of all capital gains belong to the top .05% (families with net worth over \$50m). This implies that capital gains are much more concentrated than income and even wealth.

The amounts in dollar terms and potential tax revenue are very large. A relevant threshold is \$50 million, which is the wealth threshold for the richest 100,000 American families (approximately the top .05%). We will refer to households with wealth above \$50 million as “super wealthy”. Table 1’s SCF numbers show that unrealized capital gains of the super wealthy currently stand at \$8 trillion. Hence, there is federal tax revenue potential of \$1.5-3 trillion from *already accumulated* unrealized capital gains alone, depending on whether the top capital gains tax rate is the current 20% or is raised to 39.6%. There is additional revenue potential in *new* capital gains to be earned in future years.

In sum, capital gains are very large and concentrated at the top, they make about half of the wealth of the ultra-wealthy and are overwhelmingly (at least 80% of the total) in the form of corporate and business shares, and two thirds of which is privately held corporate and business shares.

Traditionally, capital gains are taxed upon realization because realization generates the liquidity to pay the tax. What makes taxation of extreme capital gains before realization possible

³ See also the discussion in footnote 7, p. 119 of Kamin (2015). Even if the step-up of basis is abolished, taxpayers still have a strong incentive to postpone realizations so that the revenue maximizing tax rate used by scorers is only modestly affected by abolishing step-up of basis. If death however is considered a realization event triggering tax, then the revenue maximizing tax rate increases somewhat (as it is no longer possible to escape or defer the tax beyond a lifetime).

⁴ This is because the estate tax was repealed in 2010 but bequeathed assets did not benefit from step-up of basis.

is the fact that corporate and business shares are by definition divisible, allowing to pay in shares even when there is no publicly traded market or no liquidity.

1.4 Existing Reform Proposals Are Major Steps Forward but Carry Limitations

Two types of proposals – realization at gift and death, and mark-to-market taxation – are prominently discussed as solutions to capital gains tax avoidance. Both proposals would be major steps forward. Realization at gift and death is an essential component to effective capital gains tax reform but can be undermined when Republicans return to office. Mark-to-market is robust to political change but can be volatile and leave illiquid assets untaxed. We now discuss these existing proposals' strengths and limitations.

1.4.1 Realization at Gift and Death Can Be Undermined by Political Change

Realization at gift and death would treat transfers of appreciated property to charities and to heirs as realization events: that is, those property transfers would be treated as property sales, with capital gains taxes due on the accrued gains. President Obama's final budget proposal included realization at death, with capital gains taxes due on gains above a \$700,000 per-couple exemption (\$200,000 universal exemption plus an additional \$500,000 for residences).⁵ Other versions call for somewhat higher exemption levels.

Realization at gift and death holds great promise, for two reasons. First, capital gains taxes will be assessed upon gift or death, rather than the current system of being waived via stepped-up basis. Second, if the wealthy know that their capital gains will not escape taxation upon gift or death, then they will have much less incentive to defer their capital gains until gift or death in the first place. Revenue scores indicate that realization at gift and death can raise substantial revenue.⁶ As explained below, we believe that realization at gift and death would substantially improve capital gains taxation and is an essential component to effective reform.

However, the effectiveness of realization at gift and death is limited by political regime change. Just as the last two Republican presidents have rolled back estate taxes, so too could future Republican presidents repeal realization at gift and death. Anticipating that future repeal, the wealthy may expect only a 50% chance of their capital gains being taxed at death and perhaps nearly a 100% chance of being able to wait to donate their assets to a family foundation or charity under a future Republican president before they die. Hence, political change can limit the effectiveness of realization at gift and death.

1.4.2 Mark-to-Market Can Be Volatile and Leave Illiquid Assets Untaxed

The key to making capital gains tax reforms robust to political change is to collect tax revenue from all wealthy holders of appreciated assets before political winds change. The reason is that future Republican presidents and Congresses will find it very politically challenging to refund tax revenue that has already been collected from the wealthiest Americans: the CBO score would be extremely negative, and the public would recoil at the prospect of the Treasury Department mailing billion-dollar refunds to billionaires.

The leading proposal for collecting more immediate capital gains tax revenue than realization at gift and death is mark-to-market taxation, also called accrual taxation. Mark-to-market overhauls capital gains taxation by ending deferral, at least on liquid assets like stocks. Capital gains tax liabilities would be computed annually based on their end-of-year value, regardless of whether the wealthy taxpayer sold their assets. For example, Jeff Bezos would pay

⁵ Department of the Treasury. 2016. "General Explanations of the Administration's Fiscal Year 2017 Revenue Proposals. <https://www.treasury.gov/resource-center/tax-policy/Documents/General-Explanations-FY2017.pdf>, pp.155-156.

⁶ The Obama administration estimated that realization at death proposal would raise \$235 billion over 2017-2026.

capital gains taxes on appreciated Amazon shares in the year that the shares appreciated even if he has not sold them, and the value of the shares on the day he actually sells would be irrelevant.

An important example of a promising and ambitious mark-to-market proposal is the “Treat Wealth Like Work” proposal by Oregon Senator Ron Wyden (Wyden 2019). His proposal would tax top capital gains at the top ordinary income tax rate and apply mark-to-market to liquid assets, while illiquid assets like private business stock would retain deferral but with interest charges. His proposal applies to taxpayers with over \$10 million in assets (or over \$1 million in annual income excluding unrealized capital gains) excluding \$2M of primary and secondary residences assets, \$5M of family farm assets, and \$3M of retirement assets. His proposal applies to future capital gains and to previously accumulated gains.⁷

Mark-to-market successfully obtains capital gains tax revenue from the living and is thus relatively robust to political change once enacted. For example, under the Wyden plan, Jeff Bezos would have to pay tax even if he does not sell or donate his Amazon shares, assuming the shares continue to appreciate, and it may be politically difficult for a future Republican Congress to mail him refunds. However, mark-to-market faces two key limitations, both of which stem from its overhaul of the system: computing ultimate tax liability each year, rather than at ultimate sale or gift.

The first limitation to market-to-market taxation is that price volatility can generate situations that appear unfair and, especially concerning to state governments, revenue volatility. There are enormous year-to-year fluctuations in assets prices. At the top of the wealth distribution, capital gains in any given year are likely to be several times larger in absolute value than ordinary income. The average return on wealth in the form of capital income (interest, dividends, rents, and business profits) is around 5% while year-to-year price fluctuations of 20% or more on corporate and business equity are not uncommon. This means that mark-to-market will create enormous volatility in required tax payments with no corresponding income flow or sales proceeds. The tax would be particularly heavy on entrepreneurs who develop the most successful businesses and the most meteoric increases and sometimes later decreases in fortunes, such as Uber before and after the COVID-19 pandemic. The public may consider enormous fluctuations in required tax payments to be unfair. In recessions like the Great Recession when asset prices fell by nearly 50%, capital gains tax revenue would dry up and could leave states with balanced budget amendments in budget crises.

Toder and Viard (2016) propose a solution to mark-to-market price volatility that closely relates to our proposal below. They propose to smooth tax payments over multiple years and to allow subsequent losses to offset past gains on which tax has not yet been paid.

However, mark-to-market smoothing does not solve the second limitation of mark-to-market: uncertain valuation of illiquid assets. Whereas liquid assets like public company stocks have up-to-the-minute market prices, illiquid assets like private company stocks do not. Hence, a mark-to-market system – which defines the tax base as each year’s capital gain – faces the fundamental challenge of fairly and accurately taxing illiquid assets. Pure mark-to-market proposals force valuation of illiquid assets despite the valuation uncertainty (Shakow 1986, Brown 1996).

More recent proposals give up on taxing private asset gains on a mark-to-market basis. The Wyden (2019) proposal maintains deferral, though with an interest charge that can lead to large taxes upon sale or liquidity as proposed by Auerbach (1991).⁸ In contrast, Toder and Viard (2016) propose taxing private businesses on a cash-flow basis, rather than on gains. Both the Wyden and Toder-Viard proposals would be enormous improvements upon the status quo.

⁷ Some plans have proposed to tax the initial stock slowly over a period of years. At the state level, Gamage and Shanske (2020) have proposed a one-time tax on the stock on unrealized capital gains.

⁸ See Batchelder and Kamin (2019) and Leierson (2020) for recent discussions of deferral charges, and Kleinbard and Evans (1997) and Leierson for practical difficulties it can generate.

However, neither proposal would immediately collect tax on the massive unrealized capital gains of the super wealthy in illiquid assets – up to \$5 trillion (Table 1) – thereby leaving up to \$1-2 trillion in potential revenue on the table while remaining vulnerable to political change.

Moreover, both proposals could provide large incentives for some companies to go or stay private, such as Amazon which has always reported low taxable income and therefore would largely spare Bezos taxation if Amazon went private or never went public in the first place. As another example, consider Facebook. Mark Zuckerberg might have chosen to keep Facebook private in order to avoid the large cumulated deferral charges tax that would have been due upon Facebook going public. If Facebook had stayed private and if the deferral charge perfectly mimicked the mark-to-market tax, then by 2020, Zuckerberg would likely have owed approximately 85% of his Facebook stake upon sale of the stock or upon Facebook going public.⁹ Hence, even though he would theoretically owe an enormous tax upon sale or going public, Zuckerberg could pay no tax and keep Facebook private indefinitely or until a future repeal of mark-to-market taxation.

1.5 Capital Gains Withholding Can Palatably Address Limitations of Existing Proposals

We propose capital gains withholding as a friendly amendment to existing proposals: the super wealthy should have to prepay taxes on extreme unrealized capital gains over ten years.

Withholding would complement realization at gift and death by collecting capital gains tax revenue from the living, thereby making withholding robust to reversal by a future Congress.

Crucially, withholding would be scored as raising revenue in the ten-year window as if illiquid assets were sold even though they need not be. An entrepreneur or otherwise illiquid taxpayer would be allowed to receive a government loan backed by the startup stock or other illiquid asset and would be required to immediately use that loan to pay withholding taxes due to IRS. The Joint Committee on Taxation (JCT) would score that cash as revenue now, while CBO would score the loan as a net-present-value wash. If the startup value collapses, IRS would issue a refund that allows the entrepreneur to repay the loan. Hence, entrepreneurs would effectively be paying in stock – the government receives 39.6% of the value of the stock upon sale – while enabling the government to score the revenue immediately, further insulating it against subsequent repeal by a future Congress.

Withholding would smooth tax payments over many years, thereby making tax liabilities and government revenue less volatile.

Withholding would protect both the taxpayer and the government from valuation uncertainty by retaining the current deferral system while implementing estimated pre-payments. Withheld taxes would be credited toward the capital gains taxes due at realization. Hence, the taxpayer can rest assured that she will ultimately not be overtaxed due to an erroneously high valuation while the asset is illiquid, and the government can rest assured that it will ultimately not suffer tax avoidance due to an erroneously low valuation while the asset is illiquid. Interest rates, refunds, and/or carryforwards can address the time value of money.

Furthermore, our withholding plan taxes the wealthy while remaining a constitutional income tax. If a super wealthy taxpayer has no unrealized capital gains income, that taxpayer faces no withholding tax.

In these ways, capital gains withholding can be seen as pragmatic intermediary between the current realization-based tax and mark-to-market taxation on the super wealthy. The next section details how capital gains withholding would work.

⁹ There are various ways to implement retrospective taxation based on how aggressive the interest charge for deferral is.

2. The Withholding Tax on Extreme Capital Gains

2.1 The Proposal

Our baseline proposal for reforming capital gains taxation comprises three changes: tax capital gains at 39.6% for taxpayers with taxable income above \$1 million, treat death and charitable gift as realization events for high earners, and withhold tax on unrealized capital gains for taxpayers with net worth above \$50 million (richest 100,000 families or top .05% of all families). The first change is the same as Vice President Biden's campaign proposal with respect to the capital gains tax rate. The second change is a version of Vice President Biden's campaign proposal to end stepped-up basis of capital gains at death. We take the specifics to be that death and charitable gift are made realization events, with exemptions similar to the Obama administration's proposal for realization at death (see Section 1.4.1 above).

The withholding tax on capital gains of the super wealthy is the novel part of our proposal and is the critical component for revenue raising. Based on the 2019 Survey of Consumer Finances, we estimate below that the super wealthy have about \$8T in unrealized capital gains (Table 1). We propose to create an annual withholding tax on these extreme gains at a rate equal to one-tenth of the top federal tax rate on realized capital gains. Under our proposal: 3.96% under our proposed 39.6% top rate (or 2% on under the current 20%). The withholding tax would stop after enough tax has accumulated to cover 90% of the 39.6% tax owed upon realization of all extreme gains. Hence, for any new dollar of extreme gain, it would take nine years for the withholding tax to accumulate to 90% of the amount owed upon realization.

All assets – both liquid assets like public company stock and illiquid assets like private company stock – would be covered by withholding. The withholding tax would be part of the individual income tax and would be credited back when taxable capital gains are realized so that there is no double tax. The credit system is based on a consolidated “withholding account” for each taxpayer, which is an ongoing record of the taxpayer's uncredited withholding amounts. Taxpayers get the credit for tax withheld whenever they realize gains, no matter which assets they sell.

To avoid creating a discontinuity at the \$50M wealth threshold, the withholding tax (in any year) cannot exceed 2 times the withholding rate of 3.96% (or 2% in current system) on wealth above \$50 M.

Example 1: A very wealthy couple. Suppose that a married couple has been very successful and has \$50M in wealth: \$30M in stocks and \$20M in houses with unrealized gains of \$20M. Because they are at the wealth threshold, the couple pays nothing under withholding.

Example 2: An extremely wealthy taxpayer who is mostly not up-to-date on their taxes. Suppose that the married couple has wealth of \$60M with \$10M in unrealized gains in 2021. The couple would pay withholding tax on 10% of the \$10M of unrealized capital gains, i.e. on \$1M. At a 39.6% rate, the couple pays \$396K in 2021, which is 3.96% of \$10M. The couple can easily pay that tax from its cash holdings.

That \$396K is collected by the IRS and used for government spending. The IRS records the \$396K in the couple's withholding account. Going forward, let's suppose that in 2022 the couple sells stock and thereby realizes \$2M in capital gains, resulting in \$792K in capital gains

tax due.¹⁰ The IRS credits the \$396K in the withholding account toward this \$792K tax due, so the couple owes only \$396K and their withholding account drops from \$396K to zero. Separately, if their wealth is still above \$50M, they will continue paying the withholding tax, until their accumulated withholding tax reaches 90% of capital gains due upon realization of all their capital gains.

Example 3: Jeff Bezos, whose enormous fortune comprises unrealized capital gains. Jeff Bezos is the wealthiest person in the world and is worth \$200B as of August 2020 according to Forbes. His fortune almost entirely comprises Amazon stock that he has never sold, so his fortune almost entirely comprises unrealized capital gains. He is therefore not at all up-to-date on his capital gains taxes, similar to other billionaires like Mark Zuckerberg and Warren Buffett.

Suppose his unrealized capital gains are \$200B on December 31, 2021. Then for tax year 2021, Jeff Bezos would pay 3.96% of \$200B, i.e. \$7.92B in withholding tax.¹¹ If Amazon's stock price stays flat, Bezos would continue to pay \$7.92B per year through 2029, at which point he will have prepaid 90% of his nearly \$79B in capital gains taxes.¹² Hence, Bezos would experience withholding as a temporary 3.96% annual wealth tax, even though withholding is a constitutional income tax: if he had no unpaid capital gains income tax, he would pay no withholding.

When Bezos eventually sells his Amazon stock, he will owe little: the \$79B in his withholding account will be credited back to him and largely cover his capital gains tax due. However, if Bezos never realizes his gains in his lifetime and passes on the stock to his heirs, then the withholding tax is never refunded, ensuring that Bezos will have paid a tax commensurate to his income, just like LeBron James and other very wealthy salaried individuals already do.

2.2 Rationale

Capital gains withholding would raise substantial revenue, improve tax justice, reduce tax avoidance opportunities, helpfully amend mark-to-market proposals, and strengthen realization-at-death proposals.

Revenue: Table 2 provides revenue estimates (from Penn Wharton Budget Model, detailed below) from taxing extreme capital gains under different parameters and regimes.

Our baseline proposal comprises four changes: tax capital gains at 39.6% for taxpayers with taxable income above \$1 million, treat death and charitable gift as a realization event for high earners, withhold tax on capital gains for taxpayers with net worth above \$50 million as outlined above, and provide credit to enable very illiquid taxpayers to pay their withholding tax.

PWBM estimates that our baseline proposal would raise \$230 billion in 2021 relative to current law, with withholding affecting only 90,000 taxpayers (0.05% of families). Over the 2021-2030 ten-year budget window, the tax would raise \$2.23 trillion relative to current law. If the top all-in federal capital gains tax rate were to remain at 23.8%, PWBM estimates that our withholding proposal would raise \$2.08 trillion 2021-2030.

¹⁰ We are assuming that current tax brackets remain the same below \$1M and are the following for married couples filing jointly: 0% on the first \$80,000 gains, 15% on gains \$80,000-\$496,600, 20% on gains \$496,600-\$1M, and 39.6% on gains above \$1M.

¹¹ If Bezos has no cash holdings, he would have to sell \$7.9B of Amazon stock in 2022 in order to pay his 2021 withholding tax. After the first year, Jeff Bezos would not have to pay extra realized capital gains tax on such sales because he would get a refund from the withholding tax he has already paid.

¹² If Amazon's stock keeps growing, Bezos will pay continue to pay withholding amounts past 2030, as withholding on post-2020 capital gains, but those annual amounts will likely be dramatically smaller than his 2021-2030 annual amounts which cover decades of unrealized gains.

Improving tax justice: The withholding tax would improve tax justice because the very wealthy can currently defer taxes on their capital gains until the gains are realized. With the withholding tax, the super wealthy would pay taxes on the income as they earn it, just like ordinary people do. The wealth threshold exemption of \$50 million ensures that only about the top .05% wealthiest (richest 100,000 families out of about 190 million US families) would pay the tax. The wealth of many top billionaires (such as Jeff Bezos or Mark Zuckerberg) is almost entirely made of unrealized capital gains. For such billionaires, the withholding tax would operate like a 3.96% annual wealth tax for the first ten years (or until they have prepaid the capital gains income tax they would owe upon realization of all their gains, i.e., 39.6% of their accumulated wealth under the current tax system). However, the withholding tax is still an income tax: if these billionaires had already paid capital gains income taxes on their capital gains income, they would pay no withholding.

Reducing tax avoidance: By raising capital gains tax rates substantially and withholding on extreme capital gains, our proposal substantially aligns the tax treatment of capital gains with the tax treatment of other forms of income. Withholding therefore substantially reduces the tax avoidance behavior of reclassifying one's labor income as capital gains income, such as in the "carried interest" loophole.

Helpful complement to realization-at-death proposals: An existing alternative policy option is to raise the capital gains tax rate to 39.6% and to treat gift and death as realization events but not to withhold capital gains taxes on the very wealthy.

As discussed earlier in Section 1.4.1, realization at gift and death is an essential tool in raising tax revenue from the very wealthy but, by itself, is limited in its effectiveness by political regime change. Future Republican presidents and Congresses may repeal the capital gains tax rate increase and realization at gift and death, thereby sparing the wealthy who have not yet died. Anticipating that future repeal, many wealthy taxpayers will avoid the tax by simply waiting to sell their assets or donate them to a family foundation or charity under Republicans, before they die.

Withholding substantially strengthens the effectiveness of realization at gift and death by minimizing the effect of future political regime change. A future government can spare the wealthy only by refunding them trillions of dollars of taxes already collected, which would be incredibly unpopular and unlikely to pass Congress. The JCT revenue score would be extraordinarily large and negative. The JCT distribution table would show the benefits going entirely to millionaires. Journalists would correctly report that the wealthiest Americans like Mark Zuckerberg would receive multi-billion refunds. Hence, the wealthy will not be able to avoid the tax by simply waiting for Republicans to return to power.

Helpful amendment to mark-to-market proposals: Another existing alternative policy option is to raise the capital gains tax rate to 39.6% and mark assets to market. Under mark-to-market taxation, capital gains tax liabilities would be computed annually based on their end-of-year value, regardless of whether the wealthy taxpayer sold their assets.

As discussed above in Section 1.4.2, mark-to-market on extreme capital gains would an extraordinary policy achievement but faces two limitations. First, price volatility can generate situations that appear unfair under mark-to-market, as wild price swings result in wild swings in tax liability. The volatility problem can be addressed by mark-to-market smoothing as proposed by Toder and Viard (2016): smoothing tax payments over multiple years and allowing subsequent losses to offset past gains on which tax has not yet been paid. Our withholding proposal generates the same volatility reduction benefits as mark-to-market smoothing.

Second and more problematically, uncertain valuation of illiquid assets puts policymakers in a bind: either they tax estimated gains on illiquid assets despite fears of over-taxation due to inaccurate valuations (Shakow 1986, Brown 1996), or they maintain deferral of capital gains taxes

on illiquid assets while accumulating interest charges (Auerbach 1991). The Wyden (2019) plan opts for the latter approach. However, just like realization at gift and death, deferral of capital gains taxes on illiquid assets opens the door to avoidance: wealthy taxpayers can wait for Republicans to return to power and absolve those interest charges.

Withholding substantially alleviates concerns that collecting capital gains tax revenue immediately on illiquid assets will result in over-taxation, in two ways. First, withholding is simply an estimated prepayment. Gains on illiquid assets sold at a later date will be taxed on the actual sale price, and any overpayment can be carried forward or refunded – so that no one is ultimately over-taxed. Second and because taxes are withheld only on extreme gains, the vast majority of taxpayers will not overpay in the first place even if estimated valuations happen to be quite off.

Hence, withholding alleviates concerns of over-taxation and permits immediate collection of (estimated) taxes on gains on illiquid assets. Immediate taxation of gains on illiquid assets dramatically improves the ten-year revenue score and makes the reform robust to political regime change.

Administration. This tax would require wealthy taxpayers to report both the basis of their assets and the market value of their assets (as of Dec 31 of the year) to estimate their total stock of unrealized capital gains. A new tax form would be created requiring taxpayers to report these values separately by asset class (such as publicly traded stock, privately held C-corporation stock, S-corporation stock, partnership shares, private equity funds, hedge funds, real estate, etc.).

As we have seen, 80% of extreme capital gains are in business shares. Businesses (corporations, partnerships), trusts, and financial institutions (such as brokers, mutual funds, hedge funds, or private equity funds) would report information returns to ultimate individual owners or clients with third party reports to the IRS showing the ownership shares, basis, and estimated fair market value. Such reports would follow the existing model already used by information returns for realized capital gains (that report basis and proceeds from sales). We will discuss below the crucial question of how to value private equity. The key point to note though is that business shares are by definition divisible allowing in-kind payment whenever liquidity or valuations are issues.

Real estate constitutes about $\frac{3}{4}$ of the remaining extreme gains (15% of total extreme gains). Local governments maintain databases of ownership, past sales, and assessed value for property tax purposes. Commercial software (such as Zillow) already provides market value estimates for almost all US real estate property by property. Hence, it would be relatively easy to create a systematic database for US real estate. Unlike business shares, real estate is typically not divisible but it is generally only a small fraction of extreme gains. Large real estate holdings are often organized as partnerships with divisible shares. Whenever lack of liquidity and indivisibility is an issue, the government could effectively take a passive share of the real estate to be repaid upon sale or transfer (perhaps requiring an annual payment corresponding to the rental share).

Art and collectibles loom large in the public debate but are actually small quantitatively (less than 3% of extreme gains). Approximate valuations could be obtained from insurance contracts to be corrected ex-post whenever valuation is revealed through a sale.

Note that following FATCA, the value of financial offshore assets is already reported on tax form 8938 (and also third party reported to the IRS) so it would be sufficient to request reporting of basis as well for such assets to implement the tax on such offshore assets.

Valuing Private Businesses. The most challenging aspect is to value private stock.

For smaller businesses that are not easily divisible (businesses with one or few owners and all of which are actively working in the business), the simplest is to use a formula based on book value (capital assets within the business), profits from recent years, and sales of products

from recent years all already reported on corporate or partnership tax data. This automatic formula-based system is how Switzerland values non publicly traded businesses for its wealth tax (the most successful wealth tax in the world).

For larger businesses (e.g. Cargill or Koch Industries), value can be estimated based on recent stock trades, recent industry valuations from analysts, private equity funds, or recent stock issuance to new investors such as venture capitalists.¹³

Importantly, it is not crucial for a withholding tax (as compared to a wealth tax) to be based on exact values as the withholding tax is subsequently credited back upon realization (in the same way that withholding taxes on workers are not exact and are reconciled at the time of tax filing). If subsequent realizations show that unrealized capital gains had been understated, the capital gains tax refund could be denied and a late tax penalty could be charged (in order to discourage under-reporting of unrealized capital gains). To help tax enforcement, the reporting of realized capital gains on schedule D should add a column for reporting the most recent valuation for withholding tax on extreme gains.

There will certainly be some tax avoidance through minimization of valuations but with good design and robust enforcement, tax avoidance can be kept relatively low.

No-risk loan option. About 60% of extreme capital gains is in non-publicly traded business shares (private equity and partnership shares) where valuation and lack of liquidity are issues. Hence, it would be very valuable for the government to be able to withhold capital gains taxes from illiquid assets. For wealthy taxpayers with both liquid and illiquid assets, the liquid assets can cover the withholding taxes due on the illiquid assets. However, for taxpayers such as Mark Zuckerberg before the Facebook IPO whose wealth is entirely in illiquid assets, it may not be feasible to force taxpayers to sell their illiquid assets in order to pay their withholding taxes.

We therefore propose the withholding tax apply equally to liquid and illiquid assets, but illiquid taxpayers can pay their withholding tax using a unique government loan program. Truly illiquid taxpayers would be able to access a separate credit program whereby a liquidity constrained taxpayer would receive a loan in the amount of the tax liability. The loan would be backed by the taxpayer's underlying illiquid asset (typically shares in a private business). The loan would accrue interest at the same Treasury rate used for discounting future cash flows. Loan repayment would be triggered when there is a change in liquidity or control of the asset.

The government loan is risk-free to the taxpayer: if the value of the collateral plummets, then the taxpayer who has paid withholding taxes is entitled to a refund on their pre-payments which have accrued interest at the Treasury rate, enabling the taxpayer to repay their outstanding government loan. Likewise, the loan carries no credit risk to the government: the refund would be required to be used to repay the outstanding government loan, so the taxpayer never defaults.

The key advantage to the credit program is that enables JCT to score the tax liability cash payment as revenue immediately. At the same time, CBO would score the loan as a wash because loans are scored on an infinite horizon, and today's loan exactly equals the infinite-horizon PDV repayment under Federal Credit Reform Act of 1990 (FCRA) scoring rules.¹⁴ Hence, capital gains withholding would be scored as generated enormous revenue from illiquid assets in the ten-year budget window. Likewise, a future bill repealing capital gains withholding would be scored as refunding enormous revenue to the ultra wealthy holding illiquid assets, increasing the political costs of repeal.

¹³ Forbes magazine maintains a list of the largest US private businesses at <https://www.forbes.com/largest-private-companies/list/>. How to measure the value of these businesses for wealth tax purposes is explained in detail in [Saez, Emmanuel and Gabriel Zucman "Progressive Wealth Taxation." Brookings Papers of Economic Activity, Fall 2019.](#)

¹⁴ Tax revenue is scored on a ten-year horizon while loans are scored on an infinite horizon. Our loan proposal satisfies FCRA's definition: "The term 'direct loan' means a disbursement of funds by the Government to a non-Federal borrower under a contract that requires the repayment of such funds with or without interest".

As an example, suppose that Mark Zuckerberg before the Facebook IPO was assessed a \$1B withholding tax under our plan, based on an estimated value of the unrealized gains on his Facebook shares. A new government credit agency would allow him to elect to pay via loan: the credit agency would disburse the \$1B to a trust or escrow account which would then route the cash to IRS as a Zuckerberg tax payment. Zuckerberg would then owe the credit agency \$1B with interest at the Treasury rate, backed by his Facebook shares. Moreover, there is no credit risk. Suppose, for example, that Facebook never IPOs and becomes worthless. Then Zuckerberg is eligible for a refund on his \$1B with interest accrued at the Treasury rate, but that refund is directed first at repaying the loan (i.e., money flows from IRS to the credit issuing agency). Hence, CBO/JCT would score the joint impact of our tax provision and the credit program as \$1B.

We note that a future proposal may develop alternative ways to raise immediate revenue from illiquid assets. Fundamentally, business shares are by definition divisible which, one way or another, can allow payment in-kind and thereby resolve both valuation and lack of liquidity issues. For example, a stricter proposal than our current manuscript could omit the loan program and force taxpayers to pay either in cash or in stock. Specifically, if government and taxpayers disagree on valuation or if taxpayers lack liquidity (e.g., their withholding tax exceeds 10% of their liquid wealth), taxpayers could pay in-kind in the form of business shares. In all cases, the government would be a passive investor with the ability to divest its stakes in priority. First, the government could auction its shares to investors when such a market can be created (presumably when the business already has outside investors such as private equity funds or venture capitalists).¹⁵ Second, the government would have priority to redeem its stakes whenever the business issues new shares to investors (i.e., investors would have to buy first the government stake); the taxpayer sells part of its stock (i.e., the government stake would be the first to be sold). Effectively, such government actions to divest would help create a market for the private stock. Economists generally believe that the creation of markets improves efficiency. Business divisibility through shares and robust shareholder protection in US business law makes such a policy possible. In-kind payments still require evaluating the basis and value to determine the fraction of shares that cover the withholding tax liability.

However, our current proposal is for a government loan program to be instituted alongside the withholding tax, which requires no change in the ownership of illiquid assets.

How would the tax administration know who has wealth above \$50m?

The best way to enforce the tax is to require information reporting from businesses and financial institutions on value and basis. Only businesses above a certain value (for example \$10m) would be subject to such reporting. Among those, smaller businesses (for example with value between \$10m and \$50m) would be allowed to use simplified valuation formulas. Financial institutions holding accounts for clients with accrued gains above a certain value (for example \$1m per client) would also be required to report information returns.¹⁶ The IRS could use such information returns combined with past information on capital income and capital gains reported on individual tax returns to flag taxpayers likely to have more than \$50m in wealth and request filing in such instances.

Could it be made more progressive? The proposed parameters are a 3.96% tax on unrealized gains above \$50M in wealth but it is possible to introduce a more graduated structure with increasing rates. It is also possible to increase the exemption threshold to say \$100m to limit

¹⁵ The majority of large private businesses have passive investors (i.e., investors that are not working in the business) making it possible for the government to become an additional passive investor.

¹⁶ Non-profit institutions already report to the IRS each year the balance of their assets. Among the largest ones (such as large private foundations or university endowment), a substantial fraction of assets is often invested in private equity generally through private equity funds.

further the number of taxpayers affected (or conversely reduce it down to \$20m or \$10m to increase revenue).

Could the tax be a hardship for homeowners or farmers with small incomes? Recall that you need at least \$50m in wealth to be liable so only the super wealthy are liable. Somebody with \$51m in wealth pays at most \$79.2k ($2 \times 3.96\%$ of \$1m). Wealthy people can generate liquidity easily using their wealth as collateral. Residences are only 2% of the unrealized capital gains of the rich. Farms are also only 2% of unrealized gains. Therefore, it is truly exceptional for a farmer (or homeowner) with modest income sources to have farms or homes worth more than \$50m with no access to liquidity. If there is a concern that farmers or homeowners with no liquidity could be in genuine hardship because of the tax (e.g., a farmer with low income but highly valuable farm land that she does not want to sell to developers), it is possible to provide a larger exemption for such assets.

What about pension funds? Because pension income is never taxed as a realized capital gain (pension income is taxed as ordinary income when pension benefits are received), capital gains on pension funds would not be part of the tax base for the withholding tax.

Would the withholding tax be refunded if capital gains vanish because the stock market crashes? Because of price fluctuations, it is possible that somebody could end up with an accumulated withheld tax that exceeds the tax due upon realization of all gains. In this case, the withholding tax ceases to apply. Taxpayers would carry over the surplus tax indefinitely. Note that realized capital losses work in the same way. You cannot deduct them from your income to get a tax reduction but you can carry them forward to offset realized capital gains in future years.

How would realized capital losses be treated? Currently, realized capital losses can offset realized capital gains but cannot offset other income (except for a very small \$3000/year allowance). Realized capital losses can be carried forward to offset realized capital gains in future years. Technically, the stock of unrealized capital gains upon which the withholding tax is based would be defined as all unrealized capital gains plus any realized capital loss carryover (from past years). That way, realizing a new capital loss that adds to capital loss carryovers would not affect withholding tax payments (as it would leave unchanged “unrealized capital gains + capital loss carryovers”). Therefore, taxpayers would no longer have incentives to realize losses to reduce their tax (in the current system, realizing losses in your portfolio is beneficial whenever you realize gains in order to offset the tax on capital gains immediately).

What about charitable giving of appreciated assets? Currently charitable giving of appreciated assets receives a double subsidy. The capital gain on the appreciated assets goes untaxed and the full market value of the gift is also deductible from income for income tax purposes. Because such a double subsidy is excessive (and benefits primarily very wealthy donors), it makes most sense to charge the realized capital gains tax on such gifts using the withholding tax as a pre-payment. The full market value of the gift remains deductible from income but the capital gain of the appreciated property has to be included in income.

Valuing securities held indirectly through private businesses. Businesses often hold other financial assets such as deposits, bonds, or corporate equity. Such financial assets should be valued directly and separately from the operating part of the business so that wealthy individuals cannot hide financial assets through shell structures. This structure already operates for the income tax of partnerships or S-corporations. If such businesses earn interest, dividends, or realized capital gains from securities they held, it is reported as such on the individual tax returns of partners or owners (and separately from ordinary partnership or S-corporation business

income). Similarly, the withholding tax should pierce the veil of layered ownership and be based on the value of the securities held through layered ownership.

Treatment of trusts. The withholding tax on capital gains also needs to apply to trusts to prevent wealthy individuals from avoiding the tax by putting their assets into trusts (in the same way the income tax applies to trust income that is not distributed to beneficiaries). Capital gains in assets held in trusts will be combined with the capital gains of the individual beneficiaries for the computation of the withholding tax (but the trust will formally pay the tax liability corresponding to the trust assets). If the trust does not distribute all of its income to beneficiaries, the trust itself will be subject to the withholding tax. Trusts designed to avoid the withholding tax will lose their exemption threshold.

Economic Effects

Reducing lock-in effects. The tax would eliminate the incentive to hold on to your assets to postpone or avoid the tax on capital gains. If you've already paid the withholding tax, selling the assets does not trigger any extra tax. This would be beneficial economically.

Would the tax discourage entrepreneurship? The withholding tax only applies after you have succeeded in accumulating at least \$50m in net worth. Hence, you do not have to pay any tax until you've already been successful and you can afford to pay. Furthermore, because start up owners have the option to pay in shares, even successful entrepreneurs with limited liquidity can conveniently pay. Paying 2% in shares every year would only slightly reduce a founders' stake over the years. For example, Zuckerberg's Facebook started in 2004. Assuming he had to pay 2% in shares every year since 2005, instead of owning 16.2% of Facebook in 2020, he would own $16.2 \cdot .98^{15} = 12.0\%$ and hence still be able to fully control the company.

Because it is only a withholding tax, it does not affect how much you end up paying as long as you eventually realize your capital gains. Now, if the decisive factor motivating you to start a business is the knowledge you can dodge paying taxes after you've succeeded, then yes, the new tax might discourage you. There is no compelling evidence in the economic literature showing that taxes reduce work among the highest paid but significant evidence that the rich exploit tax loopholes to avoid paying, hence the need for robust enforcement.

Could the tax lead to billionaires' flight? US citizens are taxed on their worldwide income no matter where they reside (with credits for income taxes paid abroad). Hence, the only way to escape US taxation is to renounce citizenship. The current law actually includes an exit tax that taxes all unrealized capital gains upon renunciation (as if they had been realized). The exit tax applies to all expatriates with net worth above \$2m or average income above \$165k. Therefore expatriation does not allow to escape the tax on unrealized capital gains.

State level taxation

The withholding tax we have proposed could also be adopted by states to strengthen their income tax. There are two main advantages of adopting such a policy at the state level (especially if the federal government has already set up the enforcement structure). First, it reduces one of the main weaknesses of state income tax (relative to federal): individuals can build a fortune in a state, never realize gains, and then simply retire to another state with less or no income taxes before realizing gains. For example, Zuckerberg could retire to Florida and realize all his gains there in which case he would avoid entirely the 13.3% tax on realized capital gains in California. With the withholding tax, some tax is at least collected while the fortune is being built in the state. Second,

the withholding tax can help smooth the volatility of tax on realized capital gains, which is valuable as states face budget balance requirements.

What happens if you move to another state and realize your capital gains there after having paid the CA withholding tax? If you move to a state that does not tax realized capital gains (such as Florida or Nevada), you would not get a refund for the withholding tax you've paid to California. If you move to a state that does tax realized capital gains (such as New York with a top rate of 8.82%), it is expected that the other state will provide credit for the CA withholding tax already paid on such gains accrued in California. Conversely, California will reciprocally provide refunds for CA residents who realize gains in California that were accrued out of state if such gains have already been taxed by the former state of residence. This avoids double taxation and the constitutional challenges they may raise. Currently, no state has instituted yet such taxes on accrued gains but a CA withholding tax could encourage other states to follow suit.

Suppose for example that Mark Zuckerberg has paid 13.3% in withholding tax on his unrealized capital gains to California when he retires to New York. Once in NY, he realizes \$10B in capital gains. Because Zuckerberg has already paid CA \$1.33B on these gains, NY is expected to provide a credit equal to the \$882m in taxes normally owed to NY (which is less than the \$1.33B he already paid to CA in withholding taxes). If he retires to FL instead and hence pays nothing in taxes when realizing gains, he would not receive any refund from CA.

Conversely, if Jeff Bezos moves from WA to CA and realizes \$10B in capital gains on his Amazon stock accrued while he was WA resident, he will pay \$1.33B in taxes to CA. If WA had instituted a tax on accrued capital gains, the CA would refund Bezos for such taxes paid to WA.

Would a withholding CA tax on unrealized capital gains be constitutional? States have great latitude to shape their income tax systems as long as this does not create double taxation with other states income tax systems and does not tax income in retirement accounts earned while the taxpayer was living in another state. Double taxation is avoided by providing refunds upon realization whether realization happens in CA or in another state that also taxes realized capital gains as just discussed. Unrealized capital gains in retirement accounts are excluded from the tax (see our point above). Therefore the withholding tax on capital gains would be constitutional.¹⁷

Fleeing the state. It is possible that the tax could encourage successful entrepreneurs to leave early to avoid the tax. For example, a CA billionaire might decide to move to Florida now to avoid paying the withholding annual 1% tax on his accumulated gains (instead of moving to Florida later before realizing capital gains). However, it is difficult to move while you are still running a business (and moving the headquarters of the business is much more difficult). Therefore, mobility risk is most important for retired billionaires.¹⁸

Score of the federal withholding tax

In December 2020, The Penn Wharton Budget Model (PWBM) kindly provided a ten-year revenue score for our core proposal. PWBM revenue scores are typically close to revenue scores provided by the Joint Committee on Taxation and the Congressional Budget Office.

¹⁷ Tax law scholars have recently proposed a one-time tax on unrealized capital gains to shore up state tax revenues as a way to tax wealth while resolving constitutionality issues (Gamage, David and Darien Shanske. "States Should Consider Partial Wealth Tax Reforms", Tax Notes 96(7), May 18, 2020).

¹⁸ To reduce such mobility risks, Gamage, David and Darien Shanske. "States Should Consider Partial Wealth Tax Reforms", Tax Notes 96(7), May 18, 2020, propose a heavier one-time withholding tax on unrealized capital gains (instead of the moderate annual tax we propose). The one-time tax eliminates mobility risk (if it applies to prior year residents) and brings more revenue immediately but it does not provide a long-term solution to the inadequate taxation of capital gains.

The PWBM analysis reported here is based in part on the 2019 Survey of Consumer Finances (SCF) with the Forbes 400 wealthiest Americans (who are excluded from the SCF) included in the analysis. The Survey of Consumer Finances (SCF) is the best survey on household wealth of American families. It also uniquely reports the stock of unrealized capital gains, with further splits by asset classes. The PWBM also relies on a demographic microsimulation model and an individual income tax microsimulation model.

Table 2a displays the PWBM results, under our proposal for a 39.6% top rate. Our focal proposal is to apply capital gains withholding to taxpayers with wealth above a \$50M exemption threshold. Table 2a reports that the PWBM analysis estimates that 2021-2030 federal government revenue under the \$50M threshold would be \$2.2T. That revenue is raised from only the very few Americans who are extremely wealthy. Table 2 reports that PWBM estimates that fewer than 90,000 tax units would be subject to capital gains withholding. Based on our estimate of there being 186M families in 2021, the implied share of families subject to the withholding tax is only 0.05%.

The table decomposes the large revenue estimate of our baseline proposal into two components. PWBM estimates that \$1.8 trillion of the \$2.2 trillion score would be paid as withholding payments while \$0.4 trillion would be paid as constructive realization at the 39.6% rate. (When scored alone, constructive realization and 39.6% rate raise less than \$1 trillion.) Table 2 also provides revenue estimates to alternative proposals that amend our baseline proposal by using alternative tax rates and exemptions. When not raising the top tax rate from 20% to 39.6%, PWBM estimates that our proposal raises \$2.08 trillion. Separately, when using a \$100 million exemption rather than a \$50 million exemption, PWBM estimates that withholding would affect only 29,000 of families and raise \$1.8 trillion. When using \$10 million exemption, PWBM estimates that withholding would affect 1.4 million families.

Figure 1 plots the ten-year revenue estimates and 2021 affected family estimates from Table 2a. The figure emphasizes the lesson that, with a high exemption threshold, capital gains withholding can raise trillions while affecting very few families. For example, a \$50M threshold raises two-thirds as much as revenue as a \$20M threshold while affecting less than one-fifth of the families.

Table 2b presents analogous revenue estimates under the current top federal capital gains rate of 23.8% (equal to the 20% statutory rate plus the 3.8% NIIT). Strikingly, with a \$50M threshold, ten-year revenue is nearly as large under a 23.8% rate as it is under a 39.6% rate: \$2.08T versus \$2.23T. The reason for the relatively small difference in the two ten-year revenue scores is the substantial assumed avoidance under the PWBM analysis.

California score of the withholding tax

In order to provide a revenue estimate for California, we conducted our own analysis based on the SCF and Forbes 400. All our computations are based on public data and we can share the data and programs. We inflate all 2019 numbers to reflect 2020 values.¹⁹ There are no state level estimates of wealth or unrealized capital gains in the SCF but it is possible to estimate approximately the fraction of the rich that reside in each state using income tax statistics by state and income groups published by the IRS and using the highest \$1m+ Adjusted Gross Income bracket.²⁰ In 2017, the latest year available, CA represented 17.4% of total US AGI and 17.8% of

¹⁹ We inflate population assuming .6% population growth per year and nominal dollar amounts growth per household by 3.7% per year in line with population and nominal wealth growth economy wide from financial accounts.

²⁰ <https://www.irs.gov/statistics/soi-tax-stats-historic-table-2>

total US realized capital gains reported in that bracket. Hence, for California scoring, we scale US numbers in the SCF by a factor 17.5%.

Because the SCF by definition excludes the Forbes 400 richest Americans, we remove billionaires in the SCF and replace them by the Forbes billionaire list (as of August 13, 2020) assuming that half their wealth is unrealized capital gains.²¹ In August 2020, the Forbes billionaires had \$3700B in wealth and hence an estimate of \$1850B in unrealized capital gains. For the California scoring, we specifically select the 150 or so Californian residents in the Forbes billionaire list.

Finally, we assume that the tax evasion rate would be 15% at the federal level and 20% at the state level. Saez, Emmanuel and Gabriel Zucman (2019) argue that with robust enforcement, a federal wealth tax could have an evasion rate of 15%. We assume here a somewhat higher evasion rate of 20% because a state has less enforcement resources and power than the federal government (if a state were to adopt the policy on its own without a federal withholding tax already in place).

It is possible to provide an alternative scoring exploiting the fact that both the SCF and federal estate tax data show that unrealized capital gains are approximately half of total wealth for the very wealthy as discussed above. Therefore, we can score the tax in the SCF using 50% of SCF wealth variable (exactly as we did for the Forbes 400). The SCF wealth variable is much more closely scrutinized and hence likely to be more reliable than the unrealized capital gains variable. This alternative tax scoring generates similar estimates. Therefore, we conclude that the 3.96% withholding tax on the capital gains of the super wealthy (wealth above \$50m) would raise approximately \$265B/year (if applied in 2020).

Because it takes time for the 3.96% tax to cumulate to the maximum 39.6% where it stops, this scoring should apply for the 10-year budget window (and grow with the size of the economy). However, as taxpayers accumulate withholding tax, the existing tax on realized capital gains receives credits and hence the net effect on tax revenue slowly declines over time. Therefore, in net, we estimate the 10-year window score to be 9 times the year 1 score (instead of 12 times when revenue just grows at the same size as the economy). Hence, our 10-year score of the 3.96% withholding tax at the federal level is \$2.4T, which is quite similar to the PWBM score of \$2.2T.

In the long term, the revenue of the withholding tax on the ultra-wealthy should exceed revenue from the current way capital gains are taxed for two reasons. First, a fraction of capital gains escape tax through the step up of basis at death or gift of appreciated property, or leaving the state for state level taxes).²² Second, the withholding tax taxes new capital gains while the

²¹ SCF data shows that among families with net worth above \$50m, unrealized capital gains represent 47.3% of total wealth (and 49.4% among those with wealth above \$100m). The 2010 estate tax required the reporting of both the net worth and the unrealized capital gains of estates. Detailed statistics have been compiled by the US Treasury. They show that for decedents with net worth above \$20m, 44% of their wealth is unrealized capital gains <https://www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/Step-Up-Basis-2014.pdf>

It is likely that among the Forbes 400, the share of unrealized capital gains is substantially higher. For example, the wealth of the very richest Californians Mark Zuckerberg, Larry Ellison, Larry Page or and Sergei Brin is in Facebook, Oracle, and Google stock is almost entirely unrealized capital gains. Therefore assuming 50% of unrealized capital gains among the Forbes 400 is conservative.

²² There is no perfect source to estimate what fraction of capital gains of the ultra-wealthy escapes taxation. At the federal level, estate tax statistics show that estates above \$20m were about \$100B (in 2016), half of which is in the form of unrealized capital gains (from US Treasury 2010 estate statistics). This means that \$50B of capital gains from the ultra-wealthy escaped taxation through step up of basis at death. In 2016, non-cash gifts were \$50B, 80% of which were given by the ultra-wealthy. If half of these gifts are unrealized gains, then \$20B (=50%*80%*50B) of gains escape taxation. In 2016, there are \$617B in aggregate realized capital gains, 45% of which were made by the ultra-wealthy (wealth above \$20m), or \$270B. This implies that $70/(270+70)=21\%$ of capital gains escape taxation through bequest or gifts at the federal level. At the CA state level, some capital gains also escape taxation through moving out of state. Assuming conservatively that 4% of capital gains escape taxation through moving out of state, a total of $21+4=25\%$ of capital gains escape taxation at the CA level.

realization based tax taxes older capital gains. As the economy grows and new fortunes are created, new capital gains are larger than old capital gains. As a result, through a pure advance timing effect, the withholding tax in the current year is larger than the realized gains tax in the same current year. As a result, we estimate that tax revenue from capital gains taxation on taxpayers would be higher by about \$20B-30B/year (measuring revenue in 2020 dollars in a 2020 economy). For CA, this would be an extra tax revenue of about \$2-3 billion per year in the long run (expressed in 2019 numbers).²³

Initial implementation option: Starting with Billionaires

The withholding tax on extreme capital gains is a novel tax that requires wealthy taxpayers to estimate gains on their assets each year. Understandably, this may generate concerns about practical feasibility. Partially for that reason, we have recommended that withholding be applied only to families with more than \$50M in wealth.

However, it may be desirable to begin with an even more concentrated version of capital gains withholding. Given how large private assets are among the wealthiest, we do not recommend excluding non-publicly traded assets. Instead, one implementation option would be to aim withholding at a substantively comprehensive base and instead increase the threshold to make the tax administration especially implementable, before including all families with wealth above \$50M. Note that the US estate tax created in 1916 started with a comprehensive base but a high threshold as well rather than a narrower base that would have invited inequity and avoidance.

Starting from the very top, it is clear how such a withholding tax would work with the wealthiest Americans. Jeff Bezos' wealth and basis are straightforward to value given that his wealth is almost fully invested in Amazon stock. Actually, the first 8 richest according to the Forbes list have wealth from publicly traded stock. You have to go down to No. 9, Michael Bloomberg to find the first person invested in private stock but Bloomberg LP has obviously attracted the attention of many analysts so valuing it is not above the capacity of the US government either. Hence, if Forbes and Bloomberg magazine can produce billionaires lists in real time, our government can measure their wealth once a year and the IRS can implement and enforce the tax on the 650 or so American billionaires. Because gains are so concentrated, Table 2 shows that limiting the withholding tax to billionaires would already raise \$925B over the 10-year window, over three times more than what the federal estate tax currently raises.

Furthermore, billionaires are precisely the group that has an especially low effective tax rate (relative to true economic income) precisely because their can shelter their gains (Saez and Zucman 2019). They are also the group that seems to have done the best during the pandemic crisis with their wealth already being substantially higher than just before the crisis. Therefore, starting with billionaires would correct the most striking tax injustice in the US tax system. Some states have already taken note and are actively thinking about it. NY State is the first one to have introduced a bill (NY Senate Bill S8277) specifically aiming at taxing unrealized gains of its billionaires.

²³ Revenue statistics from the [Governor's Budget Summary 2020-21](#) show that tax revenue on realized capital gains in CA averaged \$12.7B from 2010-2019 (expressing revenue in 2019 dollars using a 5% annual nominal growth). About half of this, or \$6B comes from the ultra-wealthy (net worth above \$20m). For this group, the tax on capital gains should increase by 33-50%, i.e., go up from \$6B (current) to \$8B, for a net revenue gain of \$2B.

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Table 1. Level and Composition of Unrealized Capital Gains

Wealth group	Total gains (in \$ billions)	Gains as fraction of wealth	Composition of gains				
			% Gains in publicly traded stock	% Gains in private business shares	% Gains in real estate	% Gains other	
A. Survey of Consumer Finances combined with Forbes billionaires 2020 (household level)							
All	33,538	33%	18%	42%	40%	0%	
Below \$10m (bottom 99%)	15,857	28%	11%	25%	63%	0%	
\$10m to \$20m (next .7%)	4,646	34%	24%	47%	29%	0%	
\$20m to \$50m (next .25%)	4,949	38%	24%	53%	23%	0%	
Above \$50m (top .05%)	8,086	50%	25%	65%	10%	0%	
Above \$100m (top .02%)	6,206	54%	26%	64%	10%	0%	
B. Estate tax data 2010 (individual level)							
\$5m to \$10m		33%	40%	18%	34%	8%	
\$10m to \$20m		34%	41%	23%	31%	6%	
Above \$20m		44%	30%	49%	16%	6%	

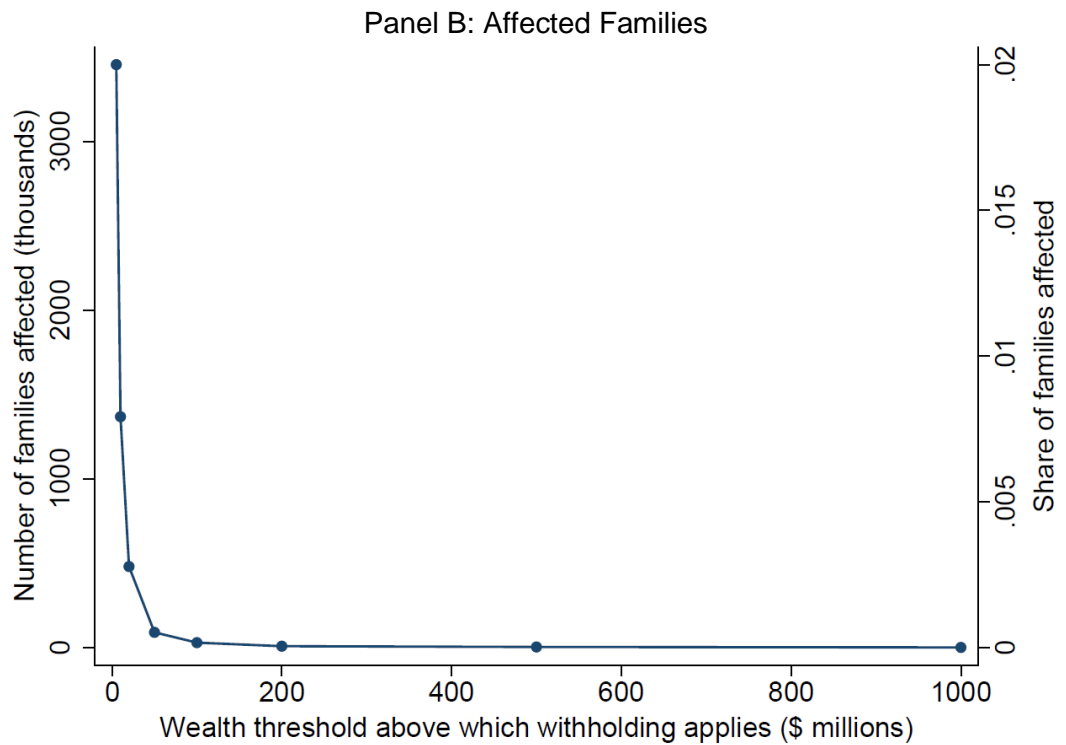
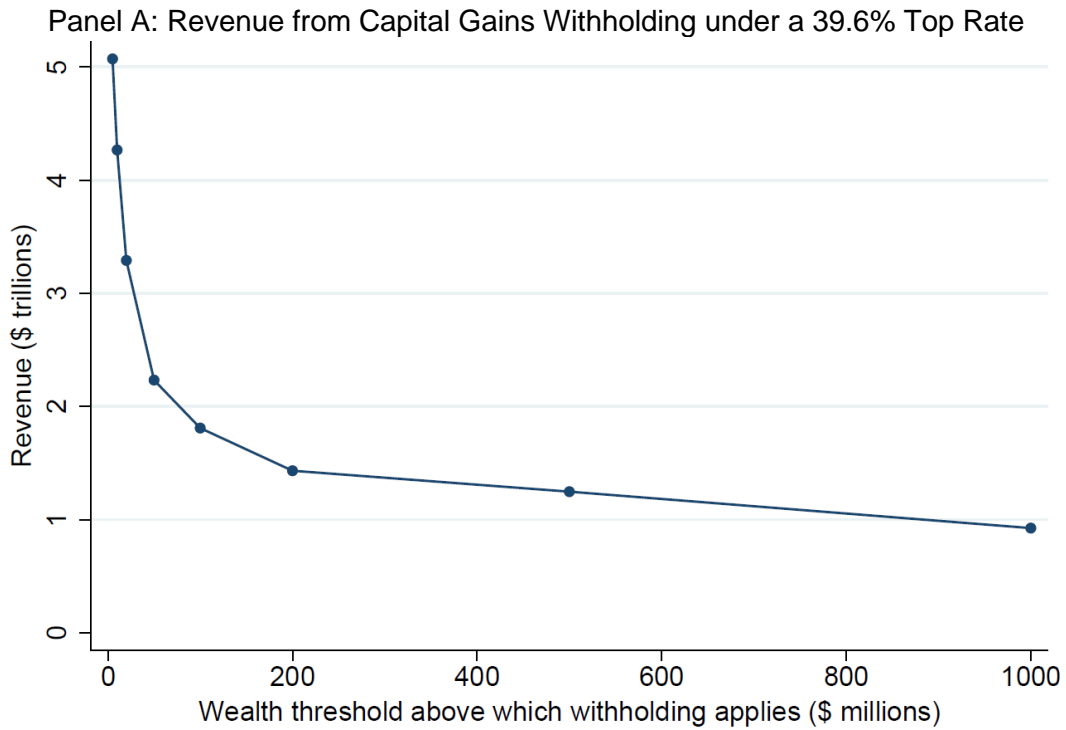
Notes: This table reports the level and composition of unrealized capital gains for various wealth groups in two datasets: the 2019 Survey of Consumer Finances (SCF) combined with the Forbes billionaire list in panel A and 2010 estate tax data in panel B. For estate tax data, the real estate category includes residences, farm assets, and other real estate. In estate tax data, the other category includes saving deposits, bonds, mortgage and notes, insurance, retirement assets, art, and all other assets. The SCF statistics are based on the authors calculations using the 2019 SCF public use data aged to 2020 and variables networth (total net worth), kgtotal (total gains), kgstmf (public stock), kgbus (business), kghouse+kgore (real estate). The SCF does not record gains for other categories. We discard the SCF billionaires and append the Forbes billionaires. We assume that half the wealth of the Forbes is unrealized gains (divided 60% in public stock, 35% in private stock, and 5% in real estate). The estate tax data are based on Table 2 in US Treasury (2014) based on Form 9913 filings for estates in 2010 that required estates to report fair market value and basis for assets (as the estate tax for 2010 was repealed but inheritors did not benefit from the step-up of basis). The estate tax data include 5505 records. Totals for the estate tax data are not reported because they include only 2010 decedents and not the full population as in SCF data. The SCF is at the household level while the estate tax data is at the individual level (so that "above \$20m" for 2010 estates corresponds approximately to "above \$50m" in SCF+Forbes 2020 data).

TABLE 2
Ten-year Revenue Estimates from Capital Gains Withholding

Wealth threshold above which withholding applies:	\$5M	\$10M	\$20M	\$50M	\$100M	\$200M	\$500M	\$1B
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>A. 39.6% top federal capital gains tax rate</i>								
Budget window (FY receipts)								
Total (\$B)	5,072	4,267	3,291	2,233	1,809	1,432	1,247	925
From withholding payments (\$B)	4,628	3,808	2,823	1,816	1,369	1,003	793	442
From constructive realization + rate increase (\$B)	444	459	468	417	440	429	454	482
2021 (CY liability)								
Total (\$B)	539	448	341	230	179	145	117	90
From withholding payments (\$B)	503	410	301	195	142	108	78	49
From constructive realization + rate increase (\$B)	36	38	39	35	37	37	40	41
Number of withholding taxpayers (2021)	3,454,509	1,368,050	479,919	89,922	29,309	8,477	3,352	604
<i>B. 23.8% top federal capital gains tax rate</i>								
Budget window (FY receipts)								
Total (\$B)	4,765	3,993	3,122	2,077	1,674	1,311	1,144	865
From withholding payments (\$B)	4,312	3,506	2,616	1,618	1,214	867	690	388
From constructive realization (\$B)	453	487	506	459	459	444	454	476
2021 (CY liability)								
Total (\$B)	448	372	282	189	151	120	102	79
From withholding payments (\$B)	410	332	239	151	110	82	63	38
From constructive realization (\$B)	37	41	43	39	41	38	40	41
Number of withholding taxpayers (2021)	3,779,297	1,580,600	535,674	107,239	35,593	10,012	3,554	627

Notes: This table presents ten-year (2021-2030) federal government revenue estimates from Penn Wharton Budget Model calculations. FY denotes fiscal year. CY denotes current year. The columns denote the wealth threshold above which capital gains withholding would apply. The panels consider different top federal capital gains tax rates. See the text for more details. Because avoidance rises with the tax rate, the number of taxpayers subject to withholding is larger in panel A (which considers a 39.6% rate) than in panel B (which considers a 23.8% rate).

FIGURE 1
High Thresholds Generate Large Ten-Year Revenue while Affecting Almost No Families



Notes: This figure plots Penn Wharton Budget Model estimates of 2021-2030 revenue and 2021 number of affected families as listed and detailed in Table 2. For the right axis of Panel B, we divide PWBM's estimated number of affected families by 182 million, which is the estimated number of U.S. families in 2021.