



# Budget Model

## Capital Gains Taxation and Deferral: Revenue Potential of Reform

**Summary:** This brief examines different approaches to removing the capital gains “lock-in effect” within a realization-based tax framework. We estimate that this change would produce between \$115 billion and \$357 billion in additional tax revenue over the next 10 years, depending on the exact design.

### Introduction

The tax treatment of capital gains differs from that of other income types because taxation occurs upon realization rather than accrual. Investors decide when, and in some cases *whether*, to pay taxes on investment gains. The discretionary nature of capital gains taxation thus creates a “lock-in effect” because the longer an investor holds appreciating property before selling, the lower the real tax burden on investment returns.

The lock-in effect arises for two reasons. First, due to the time value of money, taxpayers can reduce the net present value of tax liability by choosing to defer realizations. Second, asset basis is “stepped up” to its market value at the time of death or charitable donation, so those who plan to leave an asset in an estate to their children can avoid capital gains tax entirely.

All else equal, the tax benefit of deferral is economically inefficient: it encourages investors to make portfolio allocation decisions based on tax considerations unrelated to real production. Scholars and lawmakers have proposed reforms aimed at limiting the tax benefit of capital gains deferral, ranging from reforming stepped-up basis at death to taxing all gains on an accrual basis.

Lawmakers have recently been exploring reforms aimed at limiting the tax benefit of capital gains deferral. In 2020, Senator Michael Bennet (D-CO) [explored](#) accrual taxation of capital gains. In 2019, Senator Ron Wyden (D-OR) issued a [white paper](#) exploring options for implementing a system of progressive mark-to-market taxation and/or lookback taxation of capital gains, wherein investors face an interest penalty for deferring gains. Senator Wyden authored a [2021 bill](#) that would impose “anti-deferral” tax accounting for billionaires. At the executive level, the [FY2022 President’s Budget](#) included a reform to stepped-up basis at death under which, for certain gains, death would be treated as a realization event for tax purposes. PWBM has analyzed these proposals and issued related research briefs, both for stepped-up basis ([I](#), [II](#), [III](#)) and more fundamental approaches ([I](#), [II](#)) including the provision of estimates for academic researchers ([Saez et al 2021](#)).

## Before Taxpayer's Death: Mark-to-Market vs Lookback Charges

One approach to removing the lock-in effect is accrual (or "mark-to-market") taxation wherein price appreciation is taxed annually. Mark-to-market taxation completely removes taxpayer discretion thus limiting avoidance opportunities. But it also raises practical concerns over the ability of the IRS to assess the value of illiquid assets without a public market price. It also might present liquidity issues to taxpayers who are unable to make the annual tax payment without first realizing their gains. In many cases, the underlying asset cannot be borrowed against (e.g., owners of sports franchises often cannot use their teams as collateral) and shares cannot be realistically sold at fair market value outside of a formal and costly SEC-registered public offering.<sup>1</sup>

Another approach---and the approach we explore herein---is lookback taxation, under which realized gains on sales of assets held for more than one year would be assessed an extra "lookback charge" in addition to normal tax liability. This extra charge is akin to interest on the accrued liability held over the holding period. This alternative retains a realization-based nature and thus does not suffer from the same price measurement concerns as accrual taxation. However, this approach must also be combined with removing basis step-up at death to fully remove the incentive to defer realizations.

## At Taxpayer's Death: Carryover Basis vs Constructive Realization

The lock-in effect is intensified by the tax code's treatment of unrealized gains at death (and transfer of property for charitable purposes), known as "stepped-up basis".<sup>2</sup> When a person dies holding appreciated property, asset basis is reset ("stepped up") to its current market value at the time of death, eliminating any taxable capital gain. Stepped-up basis is an especially important tax planning technique for wealthier investors who plan on giving assets to their children in death and have other sources of liquidity to meet consumption needs.

Generally speaking there are two alternatives to stepped-up basis, both of which have international precedent in peer countries (OECD 2021). The first is "carryover basis" wherein asset basis only resets when it is sold in a market transaction. Under this regime, inherited assets retain the decedent's basis. Carryover basis retains a realization approach such that liquidity concerns are minimized, but investors may continue to defer realizations anticipating that stepped-up basis will be re-instituted in the future.

The second alternative is constructive realization under which transfer at death and/or charitable contribution is treated as a market realization for tax purposes. Constructive realization is a more stringent alternative than carryover basis, reducing the likelihood that households defer realizations indefinitely. However, taxpayers with large gains on illiquid assets – for example, a family business – may not have sufficient liquidity on hand to settle tax liabilities.

## An Illustrative Policy Reform

To help generate a reference point for lawmakers and policy experts interested in these issues, we model the revenue effects of an illustrative fundamental reform of capital gains taxation.

The proposal implements a version of lookback taxation on capital gains structured as a holding period-dependent top tax rate. That is, the top tax rate on realized capital gains rises with asset holding period,

mimicking an interest charge on accrued tax liability over the time between purchase and sale. For realized capital gains on assets held for 1 year, the top rate would be the current-law value of 23.8 percent. For longer holding periods, it would rise commensurately with the tax benefit of deferral assuming a 4 percent discount rate:<sup>3</sup>

Table 1. Tax Rate by Holding Period

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Holding period	Tax rate	
	31.8% max rate scenario	40.8% max rate scenario
1	23.8%	23.8%
2	24.2%	24.2%
3	24.5%	24.5%
4	24.8%	24.8%
5	25.2%	25.2%
6	25.5%	25.5%
7	25.8%	25.8%
8	26.2%	26.2%
9	26.5%	26.5%
10	26.8%	26.8%
15	28.3%	28.3%
20	29.7%	29.7%
30	31.8%	32.1%
40	31.8%	34.1%
50	31.8%	35.7%
75	31.8%	38.8%
100	31.8%	40.3%

To highlight how this change interacts with other dimensions of reform, we analyze combinations of policy scenarios across four dimensions: how holding period is calculated, the tax treatment of unrealized gains at death, the maximum top rate paid on deferred gains, and whether taxes on qualified dividends are also raised.

**Holding period determination.** We model several policy alternatives for calculating a taxpayer’s holding period:

1. **Prospective version.** This option would “grandfather in” existing gains, so holding period for tax purposes is reset on January 1st 2022.
2. **Retrospective version.** Under this option, holding period for tax purposes reflects actual holding period.
3. **Retrospective version with transition year.** Under this option, holding period for tax purposes reflects actual holding period, but for tax year 2022, taxpayers subject to the top capital gains rate would have the option to realize gains on assets held for more than one year at the current-law rate of 23.8 percent.

**Tax treatment of unrealized gains at death.** We model the proposal under two reform scenarios to stepped-up basis.

1. **Carryover basis.** Under this option, heirs who inherit appreciated property would retain the decedent’s basis for tax purposes, and any tax would apply when the asset is eventually sold. An exemption would apply per decedent such that \$1 million of unrealized gains could be stepped up in death. The exemption would be allocated discretionarily across assets. The current-law primary residence exclusion and stepped-up treatment for charitable contributions would still apply.
2. **Constructive realization.** Under this option, unrealized gains above an exclusion amount would be taxed at death. (Spousal transfers at death would be untaxed, and charitable contributions of appreciated property would retain stepped-up basis treatment as under current law.) The exclusion amount would be \$1 million, with an additional \$500,000 for primary residences. (For a smaller tax base, such as billionaires only, the potential revenue would be considerably lower.) For gains on assets that are not publicly traded, taxpayers would have the option of paying in interest-free equal installments over 15 years.

**Top capital gains rate.** We model the proposal under two top rate scenarios.

1. **31.8 percent.** This option would raise the top capital gains rate to 28 percent, which, when combined with the Net Investment Income Tax (NIIT), creates a total top rate of 31.8 percent on capital gains held for longer than one year.
2. **40.8 percent.** Under this option, the maximum capital gains rate would be set to the top ordinary rate (37 percent through 2025 and 39.6 percent after). The total rate including the NIIT would be 40.8 percent through 2025 and 43.4 percent after.

**Dividend tax increase.** We model the proposal under two scenarios for dividend taxation.

1. **Current law.** This option would retain the top qualified dividend rate of 20 percent (23.8 percent including the NIIT).
2. **Matches top capital gains rate.** Under this option, the top qualified dividends tax rate would increase to the maximum capital gains rate (either 31.8 percent or 40.8 percent depending on the scenario).

Table 2 shows the revenue estimates for a given scenario. Use the drop downs to toggle between scenarios.

Table 2. Projected Revenue Effects by Scenario

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Tax treatment at death	Top rate	Dividend tax increase	Holding period determination													2022-	2032-
				2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2031	2041		
Carryover basis	0.318	No	Prospective	0.3	2.6	5.2	7.7	10.4	12.8	15.2	17.5	20.3	23.5	115.5	380		
Carryover basis	0.318	No	Retrospective	13.2	17.4	18.6	20.1	22.2	23.8	25.5	26.9	29	31.9	228.6	429.6		
Carryover basis	0.318	No	Retrospective, with transition period	161.4	47.5	7.7	6.3	5.9	5.8	6.6	8.4	11.9	17.1	278.6	390.6		
Carryover basis	0.318	Yes	Prospective	5.9	10.1	13.2	16.4	21.4	25.2	28.2	30.8	34.2	38.9	224.2	576.2		
Carryover basis	0.318	Yes	Retrospective	19.1	25.2	26.9	28.9	33.4	36.5	38.7	40.3	43.1	47.5	339.6	626.9		
Carryover basis	0.318	Yes	Retrospective, with transition period	167.2	55.3	16	15.2	17.1	18.4	19.8	21.8	26	32.7	389.7	588		
Carryover basis	0.408	No	Prospective	0.3	2.6	5.2	7.7	10.4	12.8	15.2	17.5	20.3	23.5	115.5	380		
Carryover basis	0.408	No	Retrospective	13.4	17.6	18.8	20.2	22.3	24	25.7	27.1	29.2	32.1	230.4	432.9		
Carryover basis	0.408	No	Retrospective, with transition period	163.1	48	7.7	6.3	5.9	5.8	6.6	8.4	12	17.1	280.9	393.5		
Carryover basis	0.408	Yes	Prospective	10.6	16.4	20	23.6	32.3	37.9	41.5	44.4	48.5	54.8	329.9	778.8		
Carryover basis	0.408	Yes	Retrospective	24.1	32	34.1	36.6	44.9	49.8	52.5	54.5	58	63.9	450.3	834.6		
Carryover basis	0.408	Yes	Retrospective, with transition period	173.8	62.4	23.1	22.7	28.4	31.5	33.5	35.8	40.7	48.9	500.8	795.2		
Constructive realization	0.318	No	Prospective	6.7	9.8	12	14.6	17	18.7	21.6	24.4	28.1	32.4	185.3	542.2		
Constructive realization	0.318	No	Retrospective	20.5	25.6	26.3	27.7	29.4	30.2	32.3	34.2	37.2	41.2	304.5	595.2		
Constructive realization	0.318	No	Retrospective, with transition period	168.7	55.7	15.3	13.9	13.1	12.1	13.4	15.7	20.2	26.3	354.5	556.2		
Constructive realization	0.318	Yes	Prospective	12.3	17.4	20.1	23.3	28	31	34.5	37.6	42	47.8	294.1	738.5		
Constructive realization	0.318	Yes	Retrospective	26.3	33.4	34.6	36.5	40.6	42.8	45.5	47.6	51.4	56.8	415.6	792.5		
Constructive realization	0.318	Yes	Retrospective, with transition period	174.5	63.5	23.6	22.8	24.4	24.8	26.6	29.1	34.3	42	465.6	753.6		
Constructive realization	0.408	No	Prospective	6.7	9.8	12	14.6	17	18.7	21.6	24.4	28.1	32.4	185.3	542.2		

Tax treatment at death	Top rate	Dividend tax increase	Holding period determination	2022-2031												2032-2041	
				2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2031	2041		
Constructive realization	0.408	No	Retrospective	20.6	25.8	26.4	27.8	29.6	30.4	32.5	34.4	37.4	41.4	306.2	598.1		
Constructive realization	0.408	No	Retrospective, with transition period	170.3	56.2	15.4	13.9	13.1	12.1	13.4	15.7	20.2	26.4	356.7	558.7		
Constructive realization	0.408	Yes	Prospective	17	23.7	26.8	30.5	38.9	43.7	47.8	51.2	56.3	63.6	399.7	941		
Constructive realization	0.408	Yes	Retrospective	31.4	40.2	41.8	44.2	52.1	56.1	59.3	61.8	66.2	73.1	526.1	999.8		
Constructive realization	0.408	Yes	Retrospective, with transition period	181.1	70.6	30.7	30.3	35.7	37.9	40.2	43.1	48.9	58.2	576.6	960.4		

## Discussion

The results indicate a tradeoff between near-term revenue potential and the stringency of reform. Constructive realization is a stronger anti-deferral option than carryover basis, and thus projected revenue raised over the budget window is larger. This effect, however, is partially offset by the policy design feature wherein tax on constructive realizations of illiquid assets can be deferred over a period of 15 years.

Similarly, a policy which resets holding period post-enactment will raise approximately half the revenue over the budget window as one that does not. (In the long run these policies produce similar budget effects as assets eventually turn over.) If a transition period is allowed, revenue which would have occurred in the second decade instead shifts into the budget window as taxpayers accelerate realizations to reduce lifetime tax burdens.

The choice of maximum tax rate has a relatively negligible budget effect because, under a tax rate schedule based on a 4 percent discount rate, only gains on assets held for more than 29 years are subject to a tax rate higher than 31.8 percent. Most taxable capital gains are associated with shorter holding periods.

These estimates account for avoidance behavior on the part of affected investors. Without stepped up basis at death, and with a rate structure designed to counteract deferral, most traditional avenues that investors use to reduce the real burden on capital gains are diminished—but some would remain. One example is charity. Assets donated to charitable causes would still receive a step-up in basis, so we project that a greater share of charitable contributions would take the form of noncash property. Applying the reforms to all transfers, not just those at death, would eliminate this avenue.

Strategic timing of realizations could also reduce tax burden under the proposal. Because the holding period-dependent rates only apply to those in the top tax bracket, taxpayers would reduce their tax bill by realizing long-held gains in years when their taxable income falls below that threshold. Applying the anti-deferral rate structure across all brackets, not just the top bracket, would diminish this avoidance opportunity.

Finally, investors who can reasonably expect an asset to appreciate faster than 4 percent annually will still have some incentive to defer realizations (though diminished relative to current law). Relative to realizing annually, deferral can be thought of as leveraged investment at a borrow rate of 4 percent. This can be diminished by increasing the discount rate on which the holding period-dependent rate schedule is based, but a move in that direction comes at the cost of discouraging financial saving.

*This proposal was developed by and analyzed in consultation with PWBM External Advisory Board member Alan Auerbach.*

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1. In private companies, active owners can more easily strip value away from passive shareholders unless passive shareholders become more active in monitoring. Passive shareholders, therefore, would demand a discount to compensate for this risk. ↩
  2. As noted by [Auerbach and Gale 2021](#), the pure time-value tax benefit of deferral described in the preceding paragraph is insignificant when interest rates are low. In this scenario, which has described the United States economy for more than a decade now, stepped-up basis is the central channel through which capital gains taxes can be avoided. ↩
  3. In theory, full tax neutrality on the timing of realization would use market-based returns that adjust in real-time. That calculation, however, would be more challenging from a tax administrative perspective. ↩