



Budget Model

The Excise Tax on Stock Repurchases: Effects on Shareholder Tax Burdens and Federal Revenues

Summary: President Biden has proposed raising the current excise tax rate on stock repurchases from 1 percent to 4 percent. We estimate that, for domestic shareholders, this tax increase would eliminate about 85 percent of the current-law tax preference for dividends over stock repurchases.

Key Points

- Buybacks and dividends are two ways for corporations to distribute earnings to shareholders. Before 2023, the ability to defer capital gains taxes created a tax preference for buybacks over dividends, which was especially valuable for firms that are less concerned with providing a market signal of entity strength associated with a longer-term commitment to paying a dividend.
- The [Inflation Reduction Act of 2022](#), however, imposed a new 1 percent excise tax on buybacks. We estimate that buybacks are on average still tax-favored for domestic shareholders. President Biden is now calling on Congress to raise the excise tax rate from 1 to 4 percent. We estimate that an excise tax of 4.6 percent would be enough to eliminate the tax preference on average.
- We estimate that raising the buyback excise tax rate would raise \$265 billion over the 10-year budget window.

[Note: This brief was updated on April 10th, 2023, to update the methodology for calculating tax parity, which was previously reported as 2.6 percent, a value that was inconsistent with the reported 10-year budget estimate. The updated tax parity did not impact the estimated 10-year revenue.]

Introduction

A corporation can distribute its earnings to shareholders in two ways. One option is to pay a dividend in which shareholders receive a fixed cash payment per share. Alternatively, the corporation can engage in stock buybacks. In this scenario, the corporation repurchases (then retires) a fraction of its own stock from shareholders, returning cash to those who sell their shares.

Though buybacks have received negative attention from politicians in recent years, economists generally note that, all else equal, paying a dividend and repurchasing stock are similar events from an economic standpoint. One important difference, however, is tax treatment. Due to several features of the tax code, shareholder distributions generally face lower effective tax rates when structured as buybacks instead of dividends.

This tax advantage was reduced when the [Inflation Reduction Act of 2022](#) imposed a new 1 percent excise tax on buybacks. President Biden, in his 2023 State of the Union address, called on Congress to raise this tax rate to 4 percent—a proposal which was [introduced in Senate legislation](#) shortly after. The proposal was included as part of the FY2024 President's Budget.

While [tax policy experts](#) have noted that the excise tax moves the tax system towards parity between dividends and buybacks, few have attempted to estimate the magnitude of this differential. In this brief, we build an economic model of shareholder taxation and use it to quantify the gap between the effective tax rate on buybacks versus dividends.

Tax Consequences of Buybacks and Dividends: The Basics

A simple example illustrates how buybacks and dividends are economically identical but generate different tax consequences. Consider a corporation with 100 outstanding shares valued at \$1 each. Then, it earns \$25 in profits and the share price rises proportionally to \$1.25. Say the corporation wants to distribute all \$25 to shareholders. To do so, it can pay a dividend of 25 cents per share. Shareholders now have $\$0.25 \times 100 = \25 in cash, and the firm's value falls back to \$100 (and its share price back to \$1).

If instead the corporation wishes to distribute \$25 via buybacks, it can simply repurchase (and retire) 20 shares at the market price of \$1.25. In this scenario, shareholders receive $\$1.25 \times 20 = \25 in cash, and the firm's value returns to $\$1.25 \times (100 - 20) = \100 . Note that the remaining shares now carry an unrealized capital gain of 25 cents.

Despite returning the same amount of cash to shareholders, the buyback scenario allows for a greater fraction of taxes to be paid in the future. For domestic investors holding the corporation's shares in a taxable account, the full amount of the dividend is taxable in the period in which it's earned. If the tax rate on dividends and capital gains is 20 percent, shareholders owe a total of \$5, leaving them with \$20 to reinvest.

But for those same investors in the buyback scenario, only the realized capital gain—the difference between sales price and purchase price on shares sold—is taxable in the current period. The tax bill is thus $20\% \times (\$1.25 - \$1) \times 20 = \$1$, leaving shareholders with \$24 after taxes. Those who don't sell are left with an unrealized capital gain, *deferring* any tax attributable to current-period earnings to the future. Tax deferral is valuable to investors because it leaves more money to be reinvested today, compounding returns over time.

Though this example is a simplification, it highlights the central mechanism through which buybacks attain tax-preferred status compared to dividends. There are several other considerations affecting the relative tax treatment.¹

- **Stepped-up basis.** Deferring taxes is beneficial per se because of the time value of money. But deferral offers an additional benefit. For investors who hold appreciated stock until death and bequeath those assets to their children, the basis for tax purposes is "stepped up" to its market value, eliminating taxes on the capital gains entirely. Because buybacks allow for a greater share of taxes to be deferred, the

benefit of stepped-up basis at death lowers the effective tax rate on buybacks and widens the tax differential relative to buybacks.

- **Holding periods.** The benefit of deferral depends on how long investors hold stock before selling. Effective tax rates on capital gains fall with time held before realization. If investors sell stocks more frequently, the tax advantage of buybacks relative to dividends is diminished.
- **Inflation.** Because the tax code does not index basis for inflation when calculating taxable capital gains, investors are subject to taxes on nominal, not real, appreciation. Therefore, all else equal, a higher inflation rate raises the effective tax rate on capital gains and diminishes the tax preference for buybacks over dividends.
- **Nontaxable domestic equity.** Income generated by assets held in pension funds, retirement accounts like 401(k)s and IRAs, or by nonprofits does not face shareholder-level taxation. [Recent estimates](#) suggest more than half of domestic-owned US corporate equity falls in this tax-exempt category. Since this tax preference applies evenly to both dividends and capital gains, it has the effect of lowering the effective tax rate on both forms of shareholder distributions. But because there are more ways to avoid tax on capital gains (namely, stepped-up basis), the benefit of tax-sheltering vehicles is larger for dividends. Thus, there is a negative relationship between the nontaxable share of equity and the buyback tax advantage.
- **Foreign investors.** The US collects a withholding tax on dividends paid to foreign investors in US corporations, typically in the range of 15 to 30 percent depending on tax treaties. But no such withholding tax exists for capital gains realized by foreigners, creating a tax preference for buybacks over dividends for US corporations owned in part by foreign shareholders. That said, foreign investors may face capital gains tax under their home country's tax system. Our analysis focuses solely on distribution taxes from the perspective of domestic shareholders, so we do not incorporate this consideration in our modeling.
- **The new excise tax on buybacks.** The Inflation Reduction Act of 2022 imposed a new 1 percent excise tax on the value of corporate share repurchases (net of issuance). Because this tax is assessed at the business entity level rather than at the shareholder level, it is levied on all US corporate equity, not just the amount held in taxable accounts. No similar firm-level tax applies to dividends, so it shrinks the relative tax preference for buybacks.

Quantifying the Tax Preference for Buybacks

The new excise tax narrows the tax differential, but by how much? What is the excise tax rate that would achieve parity? How sensitive are estimated tax differentials to taxpayer behavior and measurement error?

To answer these questions, we build a simple model of capital income taxes on domestic shareholders investing in US corporate equity. The model draws on long-established methods for measuring taxes on capital income.² A detailed mathematical description can be found in the [Technical Appendix](#), but we summarize the main features here.

Firms earn a real rate of return on investment, a fraction of which is retained for future investment while the remaining amount is distributed to shareholders. Buybacks trigger a firm-level excise tax liability, but dividends do not. Shareholders face individual-level taxes on dividends and realized capital gains, though a

fraction of their equity is held in tax-preferred vehicles (e.g., retirement accounts) and is thus shielded from tax. Shareholders sell after some holding period or they defer realization until death, at which point the capital gain is erased for tax purposes. Inflation affects tax burdens by raising nominal asset prices over time.

The model shows that the excise tax functions as an additional capital income tax, with effects economically similar to those of shareholder-level dividend taxes. One key difference, though, is that it is applied at the firm level, meaning that investors who hold equity in nontaxable accounts or use tax planning techniques like stepped-up basis cannot avoid the tax.

Given a set of assumed economic, behavioral, and policy parameters, the model calculates effective tax rates (ETRs) for two scenarios: one where the firm uses buybacks to distribute earnings, and another where earnings are paid as dividends. The difference in ETRs measures the relative tax preference for buybacks.

We draw on previous studies to obtain estimated values for key equation parameters, as outlined in the [Technical Appendix](#). But some parameter concepts, for example the share of corporate equity held until death, can be difficult to measure. For robustness, we include two scenarios defined by parameter values that generate a feasible lower and upper bound on the tax rate differential.

Table 1 shows estimated ETRs for buybacks and dividends under current law. It also shows what buyback excise tax rate would be required to achieve tax parity with dividends.

Table 1. Estimated Effective Tax Rate Differentials

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Scenario	ETR, dividends	ETR, buybacks	Buyback advantage (percent difference in ETR)	Buyback excise tax rate required for parity
Baseline	5.6%	5.0%	12.3%	4.6%
Lower bound on differential	4.6%	4.6%	0.01%	1.6%
Upper bound on differential	8.2%	4.0%	50.7%	9.6%

The results indicate that shareholder ETRs are much lower than the statutory rates they face. This difference is due to the large share of equity held by nontaxable shareholders, the high proportion of earnings retained for future investment, and the ability to escape taxation altogether on gains held to death. Together, these factors drive down our baseline ETR estimates to 5.6 percent for an investment paid out in dividends and to 5.0 percent for those same distributions structured as buybacks—a difference of about 70 basis points, or a 12.3 percent difference. The finding that ETRs are low is robust to alternative parameter assumptions.

Next, we turn to the effect of the excise tax on the tax differential between buybacks and dividends. We find that, under our baseline specification, a 4.6 percent buyback excise tax would be sufficient to eliminate the tax differential. This estimate, though, is subject to uncertainty. Our lower-bound estimate implies that a 1.6 percent excise tax rate sufficient for offsetting the tax advantage over buybacks, and our upper-bound estimate suggests a much larger gap. How would the proposed 4 percent tax on buybacks change the tax

differential? Under our baseline specification, we find that the buyback tax advantage would fall to just 10 basis points, representing an 85 percent reduction from current law levels.



We estimate that raising the buyback excise tax rate would increase federal revenue by \$265 billion over fiscal years 2023 to 2032. This estimate reflects the direct effect of the excise tax as well as indirect effects owing to behavioral changes. Corporations might respond to a higher buyback excise tax rate by shifting from buybacks to dividends, which increases dividend tax revenues but reduces excise and capital gains taxes. Corporations may also respond by retaining a greater share of earnings, which would reduce excise taxes and increase capital gains taxes over time as investors realize gains on appreciated stock, though some of these additional gains would escape taxation when held until death. The net budgetary impact of these second-order effects is ambiguous ex-ante; PWB's assessment is that the net budgetary effect will be modestly negative over the budget window.

Future Work

The buyback excise tax rate is just one of several tools through which policymakers can achieve buyback-dividend tax parity. Relative to other means of equalizing tax treatment of dividends and buybacks, the excise tax places a larger burden on tax-exempt equity and only does so on an economy-level, not an individual-level, basis, rendering it a comparatively blunt tool for this purpose. One alternative involves taxing nonparticipating shareholders in a buyback as if they had sold shares—an idea first formulated in [Chirelstein \(1969\)](#) and more recently proposed by [Senator Rubio in 2018](#). Another option is to tax capital gains on an accrual basis with no stepped-up basis at death, accomplished either through a mark-to-market approach (e.g., [Senator Wyden's proposal](#)) or a "lookback charge" on deferred realizations. Our model suggests that treating death as a realization event alone would reduce the current-law buyback tax advantage by more than half.³

Finally, to put these results in perspective, it is helpful to highlight a few limitations of our modeling approach. One issue is the level of aggregation. The model applies economy-wide averages when measuring the tax differential, but in reality, shareholders' tax situations are heterogeneous across many dimensions, including income, account type, and time. Thus, individual shareholders and firms may face a range of tax incentives when it comes to deciding between dividends and buybacks. Another limitation is that the scope is limited to domestic shareholders, abstracting from a substantial base of foreign owners of US corporations. To the extent that the lack of withholding tax on capital gains realizations by foreigners drives corporations' decision to pay buybacks, our analysis offers a conservative estimate of the tax differential. A final caveat is that the analysis does not consider behavioral feedback from taxpayers. For example, if firms respond to the buyback excise tax by retaining a greater share of current-period earnings, shareholders' may in turn respond to larger unrealized gains by deferring a greater proportion of gains until death, further affecting the relative tax differential. In our analysis, all calculations reflect the observed behavior of taxpayers under current law.

Technical Appendix

In this section, we describe the model of effective tax rates in further detail. Consider a representative corporate sector firm that earns real rate of return  on the marginal investment. A fraction  of current-

period earnings are retained and the remaining amount, $E - D$, is distributed to shareholders. Let P and Q be the price and quantity of outstanding shares at time t , where price and quantity are normalized such that $PQ = 1$.

The firm can either distribute D by paying dividends or repurchasing shares. We first consider the case of dividends.

Dividends

The firm retains E and distributes D as a dividend on which a representative domestic shareholder incurs dividend tax liability at a rate of τ . Only α percent of corporate equity is held in taxable accounts, so the net-of-tax dividend payout is $(1 - \alpha\tau)D$. At the end of the period, the firm's value has risen by per-share real earnings compounded by the rate of inflation, π , less pre-tax payouts:

$$V_{t+1} = (1 + \pi)V_t - D$$

The shareholder then re-invests the net earnings by buying $\frac{(1 - \alpha\tau)D}{P_{t+1}}$ newly issued shares at current market price P_{t+1} :

$$Q_{t+1} = Q_t + \frac{(1 - \alpha\tau)D}{P_{t+1}}$$

As a result, aggregate investment basis B rises by the net-of-tax dividend:

$$B_{t+1} = B_t + (1 - \alpha\tau)D$$

This process repeats for N discrete periods at which point the shareholder sells their stake (to another household, i.e., itself in the representative shareholder framework). In doing so, it incurs capital gains tax τ_c .

The investor's real after-tax annual rate of return r can be calculated as:

$$r = \frac{B_N - B_0}{B_0(N-1)}$$

Under US tax law, capital gains on investments held until death are untaxed because the basis is "stepped up" to its market value at the time of death. Therefore, we model the process described above for two types of shareholders: one that holds for N_1 periods, selling before death; and another that holds for N_2 periods, upon which gains on the sale are taxed at a rate of τ_c . If α is the fraction of gains held until death, the overall real after-tax rate of return is a weighted average r .

Finally, the shareholder's effective tax rate on investment is:

$$\tau_{eff} = \frac{B_N - B_0}{B_0(N-1)} - r$$

Buybacks

An alternative way for the firm to distribute earnings to the shareholder is to repurchase outstanding shares. At the end of period t , after earning E but before announcing the buyback, the firm's price (and its value, because $PQ = 1$) is P_t .

The firm incurs an excise tax at a rate of τ per dollar of shares repurchased. Because this tax is applied to the business entity and not its shareholders, the tax lowers the firm's value. Thus a buyback worth D lowers the firm's price to $P_t - \tau D$. This is the price P_{t+1} at which the firm buys back $\frac{D}{P_{t+1}}$ percent of outstanding shares. The total quantity repurchased is:

$$Q_{t+1} = Q_t + \frac{D}{P_{t+1}}$$

One implication is that τ rises with τ . In other words, a higher excise tax on buybacks means that firms must redeem a greater share of outstanding equity to deliver the same pre-tax return. (In the presence of a nonzero buyback excise tax, the firm may instead opt to reduce its buyback amount proportionally to the amount of tax, to τ . This scenario differs from the scenario described in the text only in net present value terms, in effect retaining a greater share of its earnings.)

There are two classes of shareholder: those who are willing to realize taxable gains during life, and those who defer gains until death. The firm is exchanging with the sell-during-life shareholder, who sells τ shares back to the firm. In doing so, it realizes a taxable gain with investment basis τ :



...to which an effective tax rate of τ applies, as in the case of dividends. The final term highlights the reason why buybacks are more lightly taxed than dividends: the deduction for basis means that only a fraction of distribution is taxed in the current period. In other words, for a given distribution, shareholders are able to defer a greater portion of the associated tax liability, allowing gains to compound which generates higher annualized net-of-tax returns.











The remainder of the buyback scenario is identical to that of the dividend scenario. The shareholder re-invests after-tax proceeds into the firm via new share issuance and the process repeats for τ or τ periods until a final sale or death occurs.⁴ The taxation of these events, and the calculation for real annualized after-tax return, is the same.

Calibration

Table 2 lists each model parameter, its range of assumed values, and the source for its baseline value estimate.

Table 2. Assumed Values for Model Parameters

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Parameter	Parameter description	Baseline value	Lower bound differential value	Upper bound differential value	Source
	Real rate of return on corporate equity	0.06	0.08	0.04	Assumed
	Rate of inflation	0.02	0.03	0.01	Assumed
	Share of current-period earnings retained for reinvestment	0.8	0.9	0.5	CBO (2014)
	Share of domestic-owned corporate equity held in taxable accounts	0.4	0.2	0.6	Rosenthal and Burke (2020)
	Average holding period for realized capital gains	10	5	15	CBO (2023)
	Average holding period for assets held until death	30	40	20	CBO (2023)
	Share of capital gains held until death	0.43	0.3	0.6	CBO (2023)
	Marginal effective tax rate on capital gains and dividends	0.21	0.21	0.21	PWBM tax model estimate
	Buyback excise tax rate	0.01	0.01	0.01	Statutory
	Tax rate on capital gains at death	0	0	0	Statutory

This analysis was produced by [John Ricco](#) under the supervision of [Rich Prisinzano](#). Prepared for the website by [Mariko Paulson](#). We thank [Daniel Hamel](#) for helpful feedback on the original tax parity calculation, which was updated in the current version.

1. Readers interested in a deeper discussion of these issues may refer to [Polsky and Hemel \(2021\)](#). [↩](#)
2. See [Fullerton, Gillette, and Mackie \(1987\)](#), [Gravelle \(1994\)](#), [Treasury \(2014\)](#), and [CBO \(2022\)](#) for examples. [↩](#)

3. Modeled by setting the tax rate at death to 21 percent, the rate for gains realized during lifetime. ↩
4. This new share issuance can be interpreted as new firms issuing equity whereas mature firms are repurchasing shares; the new share issuance does not net against buybacks for purposes of excise tax calculation. ↩