



# The Tax Burden on Business Investment Under Joe Biden's Tax Proposals

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## Key Points

- Former Vice President and Democratic presidential candidate Joe Biden has proposed several tax increases that focus on raising taxes on business and capital income.
- Taxing business and capital income can affect saving and investment decisions by reducing the return on these activities and distorting the allocation across different assets, forms of financing, and business forms.
- Under current law, the weighted average marginal effective tax rate (METR) on business assets is 19.6 percent, but it varies significantly by asset type, business form, industry, and how the asset is financed.
- Biden's tax proposals would raise the METR on business investment in the United States by 7.8 percentage points to 27.5 percent in 2021. The effective tax rate would rise on most assets and new investment in all industries.
- In addition to increasing the overall tax burden on business investment, Biden's proposals would increase the bias in favor of debt-financed and noncorporate investment over equity-financed and corporate investment.

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Former Vice President and Democratic presidential nominee Joe Biden has proposed several tax increases that are estimated to raise about \$3.8 trillion between 2021 and 2030.<sup>1</sup> His proposals would raise the corporate income tax rate, broaden the business tax base, and repeal major provisions of the Tax Cuts and Jobs Act (TCJA) that reduced taxes for high-income households. His proposals would also raise taxes on capital gains and dividends by raising the tax rate and limiting the ability to step up the basis of a gain at death.

Biden's proposals focus on raising taxes on business and capital income. Doing so means that

Biden's plan primarily raises revenue from high-income households.<sup>2</sup> However, it also means his plan will affect incentives to save and invest in the United States.

Business taxes can increase the required return on investment and reduce the incentive to invest, eventually leading to a smaller capital stock, lower labor productivity, lower wages, and lower total output. Individual taxes on capital income can reduce the incentive for individuals to save by reducing the returns they receive on their investments. Lower national saving can reduce available

financing for new investment and reduce ownership of capital assets by Americans, which can lead to lower output and lower national income.

The federal tax system can also distort the allocation of investment across different types of assets and business forms. Provisions such as bonus depreciation, the special 20 percent deduction for business income, and the research and development credit apply to only certain capital assets and businesses. As a result, assets such as equipment and intellectual property products held in a pass-through business face much lower effective tax rates than an office building held by a traditional C corporation.

In addition, taxes can distort how firms finance new investments. Under current law, firms that finance new investment with debt receive a deduction for interest payments to lenders. In contrast, firms do not receive a deduction for dividend payments made to owners of equity. This results in a bias in favor of debt-financed investment.

This report estimates the impact of Biden's tax proposal on the effective tax burden on business assets in the United States using the Policy Simulation Library's Cost-of-Capital-Calculator (CCC).<sup>3</sup> The report begins with an overview of how capital is taxed in the United States and of Biden's tax proposals. It then presents estimates of the marginal effective tax rate (METR) on investment under current law and under Biden's proposals.

## **The Taxation of Business Investment Under Current Law**

The tax treatment of capital under current law is complex. How a capital asset is taxed depends on the asset's characteristics, the legal form of the business that owns the asset, how the asset is financed, and the tax treatment of the saving by the individual who ultimately finances the asset.

The effective tax rate on investment depends on the legal form of organization. Business profits earned through a traditional C corporation face a tax rate of 21 percent. However, noncorporate or pass-through business profits do not face an entity-level tax. Instead, they are "passed through" to their owners and taxed as ordinary income. As such, they face ordinary income tax rates ranging

from 10 percent to 37 percent. Pass-through business income also qualifies for a special deduction called Section 199A. This provision allows taxpayers, with some limitations, to deduct 20 percent of their qualifying business income against their taxable income.<sup>4</sup>

The tax treatment of investment also depends on the type of asset. Investment made by both corporate and noncorporate businesses in short-lived assets (asset lives classified as 20 years or fewer) qualify for 100 percent bonus depreciation.<sup>5</sup> This provision allows companies to fully deduct the cost of investment, such as machinery and equipment, in the year they are put in service. Likewise, research and development costs can typically be expensed and qualify for the research and development tax credit. In contrast, businesses are required to deduct the cost of long-lived assets, such as buildings and structures, over 27.5 and 39 years.

The method by which a firm finances a given investment affects its taxation. Firms can choose to finance a new investment by either borrowing funds (debt) or issuing equity. Under current law, the interest payments are deductible against taxable income with some limitation. Dividend payments are not deductible against taxable income.

The returns to capital investment may also be taxed at the individual level. The taxation of capital income at the individual level depends on the business form and type of income. Individuals who save by either acquiring equity or lending a corporation money can face taxation on their returns. Interest income is taxed as it is earned as ordinary income at rates between 10 percent and 37 percent. Equity income is either taxed as ordinary income, in the case of non-qualifying dividends or short-term capital gains (capital gains on assets held for less than a year), or at special lower rates (0 percent to 20 percent) for qualified dividends and long-term capital gains (assets held for a year or more). In addition, high-income taxpayers are subject to the net investment income tax of 3.8 percent on capital income.

A large portion of saving is shielded from taxation. Individuals who save in traditional and Roth individual retirement arrangements, 401(k)s, and other tax-preferred accounts face no taxation on their returns to both equity and debt. Individuals

can also defer taxation on certain assets. For example, individuals who earn returns as capital gains due to the appreciation of a stock's value may defer taxation on those gains until the asset is sold. This deferral reduces the effective tax burden on these returns, and capital gains held until death may not face taxation at all.

The individual tax on capital gains and dividends represents a second layer of tax on corporate investment financed by equity. Corporations that finance investments by issuing equity cannot deduct payments made to shareholders. Then, equity income is taxed again when shareholders earn it. In contrast, debt-financed corporate investment and all investments made by noncorporate businesses are not taxed at the entity level but are taxed when savers earn interest income. However, if these returns are earned in tax-free accounts, there is either one layer of tax or none at all.

## **The Taxation of Capital Under Biden's Tax Proposals**

Biden has proposed several tax increases that would raise the tax burden on business profits and the return to saving at the individual level.<sup>6</sup>

Biden's proposal would raise the corporate income tax rate from 21 percent to 28 percent. In addition, his proposals would enact a 15 percent minimum tax on book income and raise the tax rate that US multinational corporations would pay on foreign profits.

Biden would also broaden the tax base for businesses. He would eliminate several provisions for the fossil fuel industry, such as expensing (a full deduction in the first year) for intangible drilling costs, percentage depletion, and several credits. In addition, he would subject the real estate industry to passive loss limitations, eliminate accelerated depreciation of rental housing, and eliminate the deferral of capital gains from similar exchanges.<sup>7</sup>

He would raise taxes on individuals primarily by scaling back the tax cuts passed as part of the TCJA for high-income households. He would raise the top statutory tax rate from 37 percent to 39.6 percent, reinstate the Pease limitation on itemized deductions, and lower the alternative minimum tax exemption threshold. Lastly, he would phase out the 20 percent

deduction for noncorporate business income (Section 199A) for taxpayers earning more than \$400,000.<sup>8</sup>

He would further raise taxes on high-income households by limiting the tax value of itemized deductions to 28 percent. His proposal would tax capital gains and dividends as ordinary income for taxpayers earning \$1 million or more. In addition, he would repeal the current step-up in basis at death for capital gains. Instead, capital gains would be taxed at death.

## **Measuring the Tax Burden on Capital**

The tax burden on new capital investment can be summarized as a "marginal effective tax rate" (METR). A METR measures the tax burden on a marginal investment, or an investment that breaks even in present value. The METR used in this report includes the impact of taxes at the business and individual levels.

At the business level, it considers the impact of statutory tax rates and credits or deductions firms get for new investment. At the individual level, it accounts for statutory tax rates and the effects of exemptions, deferrals, deductions, and any other taxes savers face on the returns to their investments.

The METR is a standard metric for evaluating the incentive effects of tax policy. The general method of calculating the METR was developed and used throughout recent decades by multiple analysts.<sup>9</sup> Currently, groups such as the Tax Policy Center,<sup>10</sup> Tax Foundation,<sup>11</sup> Congressional Budget Office,<sup>12</sup> and the US Treasury's Office of Tax Analysis<sup>13</sup> use this approach to estimate the effective tax rate on investment. The methodology used in this report is detailed in the appendix.

The METR measures the extent to which the tax code places a burden on future consumption (saving and investment) relative to present consumption.<sup>14</sup> A tax code that is neutral with respect to present and future consumption (a consumption tax) would place no burden on new saving and investment. Thus, the METR would be zero.<sup>15</sup> In contrast, a pure income tax burdens future consumption more than present consumption. As such, the METR would be positive.

In addition, the METR can evaluate the distortions a tax system creates across different types of

**Table 1. Effective Marginal Tax Rates on Business Investment by Asset, Legal Form of Organization, and Financing**

	2021			2030		
	Current Law	Biden	<i>Difference</i>	Current Law	Biden	<i>Difference</i>
<b>Overall Business Investment</b>	19.6%	27.5%	7.8%	26.6%	34.0%	7.3%
<b>Equipment</b>	7.5%	14.7%	7.2%	23.7%	33.0%	9.2%
<b>Intellectual Property</b>	-5.5%	1.6%	7.0%	18.1%	29.2%	11.1%
<b>Structures</b>	20.1%	29.0%	8.8%	25.6%	33.8%	8.3%
<b>Inventory</b>	30.0%	39.8%	9.9%	33.2%	42.0%	8.8%
<b>Land</b>	24.5%	30.2%	5.7%	28.9%	33.3%	4.4%
<b>Corporate Investment</b>	19.6%	31.8%	12.2%	26.5%	38.8%	12.4%
<b>Equipment</b>	9.5%	19.1%	9.5%	24.6%	36.5%	11.9%
<b>Intellectual Property</b>	-3.4%	5.9%	9.3%	19.0%	32.5%	13.5%
<b>Structures</b>	21.0%	33.3%	12.3%	25.9%	38.0%	12.1%
<b>Inventory</b>	31.7%	45.2%	13.5%	33.1%	46.0%	12.9%
<b>Land</b>	28.5%	41.7%	13.2%	30.0%	42.5%	12.6%
<b>Noncorporate Investment</b>	19.7%	22.3%	2.6%	26.9%	28.2%	1.3%
<b>Equipment</b>	1.7%	2.2%	0.4%	21.3%	22.9%	1.6%
<b>Intellectual Property</b>	-14.5%	-17.2%	-2.6%	14.3%	14.8%	0.5%
<b>Structures</b>	18.6%	21.3%	2.7%	25.0%	26.4%	1.4%
<b>Inventory</b>	26.9%	30.6%	3.7%	33.4%	35.3%	1.9%
<b>Land</b>	22.9%	25.7%	2.8%	28.5%	29.7%	1.2%
<b>Equity Financing</b>	20.1%	29.6%	9.5%	27.1%	35.9%	8.8%
<b>Debt Financing</b>	18.0%	17.8%	-0.2%	25.3%	25.9%	0.6%
<b>Standard Deviation by Asset</b>	10.6%	12.9%	2.3%	5.1%	7.5%	2.4%

Source: Author's calculations using Cost-of-Capital-Calculator version 1.0.8.

**Table 2. Marginal Effective Tax Rates on Business Investment by Major Industries, Current Law, and Biden's Proposals**

	2021			2030		
	Current Law	Biden	Difference	Current Law	Biden	Difference
<b>Accommodation and Food Services</b>	23.6%	31.3%	7.7%	28.8%	35.6%	6.8%
<b>Administrative and Waste Management Services</b>	12.9%	20.1%	7.2%	25.5%	33.1%	7.7%
<b>Agriculture, Forestry, Fishing, and Hunting</b>	18.1%	23.6%	5.5%	27.1%	31.9%	4.8%
<b>Arts, Entertainment, and Recreation</b>	13.3%	19.9%	6.6%	22.8%	29.3%	6.5%
<b>Construction</b>	18.3%	23.5%	5.2%	26.6%	31.1%	4.5%
<b>Educational Services</b>	22.2%	30.8%	8.6%	27.1%	35.0%	7.9%
<b>Finance and Insurance</b>	20.5%	30.7%	10.2%	28.0%	38.1%	10.1%
<b>Health Care and Social Assistance</b>	20.0%	27.6%	7.6%	26.8%	33.8%	7.0%
<b>Information</b>	10.0%	19.8%	9.8%	24.0%	35.4%	11.4%
<b>Management of Companies and Enterprises</b>	23.0%	34.1%	11.1%	28.7%	39.4%	10.7%
<b>Manufacturing</b>	17.8%	28.7%	10.9%	26.1%	37.2%	11.1%
<b>Mining</b>	11.1%	19.9%	8.7%	20.1%	29.6%	9.5%
<b>Other Services, Except Government</b>	18.8%	24.7%	5.9%	25.0%	30.0%	5.0%
<b>Professional, Scientific, and Technical Services</b>	10.1%	16.6%	6.5%	24.2%	31.3%	7.1%
<b>Real Estate and Rental and Leasing</b>	22.9%	27.9%	5.0%	28.0%	31.6%	3.6%
<b>Retail Trade</b>	25.7%	36.1%	10.4%	30.0%	39.6%	9.6%
<b>Transportation and Warehousing</b>	12.2%	20.9%	8.7%	21.6%	31.0%	9.3%
<b>Utilities</b>	10.1%	19.5%	9.4%	22.6%	33.6%	11.0%
<b>Wholesale Trade</b>	24.7%	35.0%	10.2%	30.2%	39.8%	9.6%
<b>Overall</b>	19.6%	27.5%	7.8%	26.6%	34.0%	7.3%
<b>Standard Deviation by Industry</b>	7.7%	11.7%	4.0%	3.8%	9.8%	6.0%

Source: Author's calculations using Cost-of-Capital-Calculator version 1.0.8.

investments. A neutral tax system along this dimension would apply a uniform METR—zero or positive—across all assets, business forms, industries, and means of financing. In contrast, a tax system that creates many investment distortions would produce large differences in METRs across different assets, business forms, and financing methods.

## Effective Tax Rates Under Current Law and Biden’s Proposal

Table 1 shows the METR under current law and Biden’s proposals in 2021 and 2030. Under current law, the METR on business investment will be 19.6 percent in 2021. However, effective rates will vary by asset type, ranging from –5.5 percent for intellectual property to 30 percent for inventory. In general, noncorporate business assets will face lower tax burdens than corporate tax assets will. Lastly, there will be a slight bias in favor of debt-financed investment (18 percent) over equity-financed investment (20.1 percent) across all assets and business forms.<sup>16</sup>

The effective tax rate on capital is scheduled to rise over the next decade under current law from 19.6 percent to 26.6 percent. This is due to the expiration of several business provisions such as 100 percent bonus depreciation and the expiration of the individual income tax cuts passed as part of the TCJA.

Biden’s proposals would increase the overall tax burden on new business investment. Under Biden’s proposals, the weighted average METR on business investment would rise 7.8 percentage points from 19.6 percent to 27.5 percent in 2021. All types of assets would face a tax increase, but the impact by asset class would vary somewhat. The effective tax rate would rise from 5.7 percentage points on land to 9.9 percentage points on inventory.

The combination of the higher corporate tax rate and higher investor-level taxes in Biden’s plan would increase the tax bias in favor of noncorporate investment. Under Biden’s proposal, the effective tax rate on corporate investment would increase by 12.2 percentage points from 19.6 percent to 31.8 percent. In contrast, the effective tax rate on noncorporate assets would rise by 2.6 percentage points from 19.7 percent to 22.3 percent.

Higher business tax rates and higher investor-level taxes, primarily on capital gains and dividends, would also increase the bias in favor of debt-financed investment under Biden’s proposals. In 2021, the weighted average tax rate on equity-financed investment would rise by 9.5 percentage points from 20.1 percent to 29.6 percent under the Biden plan. In contrast, the METR on debt-financed investment would fall by 0.2 percentage points under Biden’s tax plan from 18 percent to 17.8 percent in 2021.

Overall, Biden’s proposals would increase the variation in effective tax rates among assets. Under current law, the variation by asset (measured as the standard deviation) is 10.6 percent in 2021. Biden’s proposal would increase the variation by 2.3 percentage points to 12.9 percent.

Biden’s proposals will have a similar impact on the overall burden on capital in 2030, raising the effective tax rate by 7.3 percentage points from 26.6 percent to 34.0 percent. However, his proposal will have a larger impact on equipment and intellectual property, which will no longer be shielded by expensing. In contrast, Biden’s proposal will have a smaller impact on noncorporate investment. This is because the TCJA tax cuts that Biden is proposing to scale back are already scheduled to expire.

**Effective Tax Rates by Industry.** Businesses in different industries use various mixes of assets that face different effective tax rates. As a result, the effective tax burden on capital varies by industry (Table 2). Industries with assets that face low effective tax rates tend to have more equipment and intellectual property, such as the information (10.0 percent), utilities (10.1 percent), and mining (11.1 percent) industries.

In contrast, industries with structures, such as real estate and rental and leasing (22.9 percent) and retail trade (25.7 percent), face an above-average tax rate. The overall variation (standard deviation) among industries will be 7.7 percent in 2021. In 2030, all industries will face a higher burden, but the variation among industries will fall from 7.7 percent to 3.8 percent.

The effective tax rate on capital in all industries would rise under Biden’s proposals, but the magnitude of the tax increase will vary significantly by



**Table 3. The Contribution to the Marginal Effective Tax Rate by Category and Biden’s Proposals, 2021**

	<b>Current Law +</b>	<b>Cost Recovery +</b>	<b>Corporate Rate +</b>	<b>Income Tax =</b>	<b>Biden Proposal</b>
<b>Overall</b>	19.6%	0.03%	1.2%	6.6%	27.5%
<b>Equipment</b>	7.5%	0.00%	–1.8%	8.9%	14.7%
<b>Intellectual Property</b>	–5.5%	0.00%	–3.7%	10.8%	1.6%
<b>Structures</b>	20.1%	0.07%	1.6%	7.2%	29.0%
<b>Inventory</b>	30.0%	0.00%	3.4%	6.5%	39.8%
<b>Land</b>	24.5%	0.00%	1.3%	4.4%	30.2%
<b>Corporate</b>	19.6%	0.01%	2.2%	10.0%	31.8%
<b>Noncorporate</b>	19.7%	0.05%	0.0%	2.6%	22.3%
<b>Equity Financed</b>	20.1%	0.03%	2.2%	7.3%	29.6%
<b>Debt Financed</b>	18.0%	0.03%	–3.8%	3.5%	17.8%

Note: “Cost recovery” includes the elimination of accelerated depreciation on rental property. “Corporate rate” includes the increase in the statutory tax rate from 21 percent to 28 percent. “Income tax” includes all other provisions.

Source: Author’s calculations using Cost-of-Capital-Calculator version 1.0.8.

industry. In 2021, effective tax rates would increase by 5 percentage points in the real estate and rental and leasing industry and 11.1 percentage points in management of companies and enterprises. Overall, his proposals would increase the variation (standard deviation) in tax rates across industries from 7.7 percent to 11.7 percent.

Biden’s proposals would have a similar impact on most industries in 2030. Effective tax rates would rise between 3.1 percentage points in construction to 7.2 percentage points in manufacturing.

**The Impact of Biden’s Proposals by Component.** Table 3 shows how each major component (cost recovery, corporate tax rate, and income tax increases) of Biden’s proposal contributes to the overall impact on the effective tax rate in 2021. Biden’s change to cost recovery, eliminating accelerated depreciation for rental properties, will have

a negligible impact on effective tax rates (0.03 percentage points over baseline). This change would affect the effective tax rate on noncorporate investment (0.05 percent) more than corporate investment (0.01 percent). This is because noncorporate businesses hold more rental properties.

Raising the corporate income tax rate from 21 percent to 28 percent would raise the effective tax rate by 1.2 percentage points in 2021, but the effective tax rate would fall for some assets. With a higher corporate income tax, the effective tax rate on assets that are eligible for expensing, equipment (1.8 percentage points) and intellectual property (3.7 percentage points), would fall. This is because the effective tax rate on equity-financed investment with expensing is zero, regardless of the corporate tax rate. At the same time, a higher corporate tax rate reduces the tax burden on debt-financed investment.

As stated previously, Biden's tax proposals would increase bias in favor of debt-financed investment. This is primarily due to the corporate rate increase, which increases the tax burden on equity-financed investment by 2.2 percentage points and cuts the tax burden on debt-financed investment by 3.8 percentage points. A higher corporate income tax rate reduces the burden on debt-financed investment because it increases the value of the deduction for interest expense for the firm.

Most of Biden's tax increase on capital is due to his individual income tax changes. Overall, these changes contribute 6.6 percentage points to his proposal's impact on effective tax rates. Most individual income tax increases are targeted at corporate capital income (capital gains and dividends). As a result, the impact is much larger on corporate assets (10 percentage points) than on noncorporate assets (2.6 percentage points).

The income tax increases would also contribute to the bias in favor of debt-financed investment. Biden's income tax increases would contribute 7.3 percentage points to the effective tax rate on equity-financed investment. This is driven primarily by taxing capital gains and dividends as ordinary income and taxing capital gains at death. In contrast, his income tax increases would contribute 3.5 percentage points to debt-financed investment.

## About the Author

Kyle Pomerleau is a resident fellow at the American Enterprise Institute, where he studies federal tax policy.

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## Appendix

### Methodology for Calculating Marginal Effective Tax Rates

This report uses the Policy Simulation Library's (PSL) Cost-of-Capital-Calculator (CCC).<sup>17</sup> The CCC is an open-source model that can evaluate the impact of different tax policies on the incentive to save and invest, measured as an effective marginal tax rate on new investment.

**The Cost of Capital.** The methodology for estimating the marginal effective tax rate on new investment starts with the service price of capital, which is the minimum gross return an investment must earn to cover the

## Conclusion

Biden has proposed tax changes that are estimated to raise about \$3.8 trillion between 2021 and 2030. He would increase the corporate income tax rate from 21 percent to 28 percent, broaden the business tax base, and raise individual income taxes, primarily on high-income households.

While these proposals would raise revenue to finance new federal programs and make the tax code more progressive, they would increase the effective tax burden on new business investment in the United States. Under Biden's proposals, the METR on new investment would rise by 7.8 percentage points from 19.6 percent to 27.5 percent in 2021 and by 7.3 percentage points from 26.6 percent to 34 percent in 2030. The effective tax rate would rise for most types of investments and for all major industries.

Biden's proposals would also increase tax distortions across different assets, business forms, and methods of financing. His proposals would increase the bias in favor of noncorporate investment over corporate investment. Biden's proposals would also increase the bias in favor of debt-financed investment. Overall, the standard deviation among assets under his plan would rise by 2.3 percentage points from 10.6 percent to 12.9 percent in 2021.



replacement cost of an asset, taxes, and an investor's opportunity cost.<sup>18</sup> For the corporate sector, the user cost of capital is equal to

$$c = \frac{(r + \sigma)(1 - tza - k)}{(1 - t)}$$

where  $c$  is the service price of capital,  $r$  is the firm's discount rate,  $\sigma$  is economic depreciation,  $t$  is the business tax rate,  $z$  is the present discounted value of depreciation deductions,  $k$  is the value of any investment tax credit, and  $a$  is any basis adjustment to the cost of investment.

The intuition behind the cost of capital formula is that as the tax rate  $t$  on new investment at the firm level increases, the higher the pretax return ( $c$ ) on a given asset needs to be to break even. However, the impact of taxation is offset by deductions ( $z$ ) and credits ( $k$ ) that firms get for the cost of new investment.

The firm's discount rate,  $r$ , is sensitive to the tax treatment of different sources of financing and the share of financing coming from each source. Under current law, companies can deduct most interest payments made to lenders but cannot deduct dividend payments made to shareholders. The firm's overall discount rate is the weighted average of these two sources and is equal to

$$r = f(i(1 - tp) - \pi) + (1 - f)E$$

where  $f$  is the share of investment financed by debt,  $i$  is the pretax interest rate,  $t$  is the corporate tax rate,  $\pi$  is inflation,  $p$  is the share of net interest deductible by the firm, and  $E$  is the real pretax return to equity.

**Taxes on Savers.** In addition to the entity-level tax, investment in the corporate sector also faces taxation at the individual level. The return for savers,  $s$ , is the weighted average return to both equity and debt:

$$s = f(i(1 - t_i a) - \pi) + (1 - f)E(1 - t_e b)$$

where  $s$  is the weighted average after-tax return for savers;  $f$  is the share of debt financing;  $i$  is the interest rate;  $t_i$  is the tax rate on interest income;  $t_e$  is the tax rate on equity income;  $a$  and  $b$  are the share of debt and equity income that is taxable, respectively; and  $E$  is the pretax return on equity. The tax rate on equity income,  $t_e$ , is the average tax rate on capital gains, weighted by the corporate payout ratio. The share of taxable capital income ( $a$  and  $b$ ) considers various provisions in the individual income tax, including retirement accounts, deferral, and step-up basis at death.

**Noncorporate or Pass-Through Businesses.** In the United States, noncorporate or pass-through businesses account for a significant share of total capital, investment, and business income.<sup>19</sup> In contrast with traditional C corporations, pass-through businesses do not face two layers of taxation. Rather, the noncorporate business profits are "passed through" directly to their owners and are included in their owners' taxable income.

The user cost of capital formula for pass-through businesses is the same as the formula for the corporate sector, with two differences. First, the tax rate ( $t$ ) is the weighted average tax rate on business profits in the individual income tax, not the corporate income tax rate. Second, this report assumes that noncorporate businesses need to pay rates of return that are competitive with the corporate sector. As such, the return to equity-financed investment for noncorporate businesses ( $E$ ) is equal to the return on corporate equity income net of any individual income tax.

Table A1. Select Tax Parameters

	2021		2030	
	Current Law	Biden	Current Law	Biden
<b>Individual Income Tax Parameters</b>				
<b>Business Income</b>	21.6%	24.1%	28.4%	29.2%
<b>Dividends</b>	18.7%	28.3%	19.9%	28.3%
<b>Interest</b>	30.8%	34.3%	34.0%	36.1%
<b>Short-Term Capital Gains</b>	33.2%	36.5%	35.1%	37.2%
<b>Long-Term Capital Gains</b>	21.5%	36.0%	21.9%	35.8%
<b>Tax on Capital Gains Deferred Until Death</b>	0.0%	36.0%	0.0%	35.8%
<b>Tax-Deferred Accounts</b>	20.7%	21.1%	25.0%	25.1%
<b>Business Tax Parameters</b>				
<b>Corporate Income Tax Rate</b>	21%	28%	21%	28%
<b>Tax Depreciation</b>				
<b>Corporate (Weighted Average)</b>	58.8%	58.9%	47.8%	48.0%
<b>Equipment</b>	100.0%	100.0%	81.2%	81.4%
<b>Intellectual Property</b>	100.0%	100.0%	80.9%	81.2%
<b>Structures</b>	63.7%	63.8%	51.8%	52.1%
<b>Inventory</b>	0.0%	0.0%	0.0%	0.0%
<b>Land</b>	0.0%	0.0%	0.0%	0.0%
<b>Noncorporate (Weighted Average)</b>	26.5%	26.6%	23.3%	23.5%
<b>Equipment</b>	100.0%	100.0%	84.2%	84.7%
<b>Intellectual Property</b>	100.0%	100.0%	83.9%	84.5%
<b>Structures</b>	49.7%	50.1%	45.4%	45.7%
<b>Inventory</b>	0.0%	0.0%	0.0%	0.0%
<b>Land</b>	0.0%	0.0%	0.0%	0.0%

**Table A1. Select Tax Parameters (Continued)**

<b>Interest Deduction Limitations</b>				
<b>Corporate</b>	16%	16%	20%	20%
<b>Noncorporate</b>	4%	4%	5%	5%
<b>Research and Development Tax Credit</b>	5.50%	5.50%	5.50%	5.50%
<b>Inventory Holding Period (Years)</b>	0.33	0.33	0.33	0.33
<b>Fraction of Inventories Using LIFO</b>	50%	50%	50%	50%

Source: Congressional Budget Office and author's calculations.

**Marginal Effective Tax Rate.** The saver-level marginal tax rate, *METR*, accounts for taxes at both the business and individual level. It is equal to the difference between the service price of capital (net of depreciation) and the after-tax return for savers, divided by the service price of capital net of depreciation:

$$METR = \frac{(c - \sigma) - s}{(c - \sigma)}$$

**Limitations.** The *METR* focuses on the tax burden on marginal investment or the investment that just breaks even in present value and earns what is considered a “normal” return. Many investments, however, can earn a “super-normal” return—that is, returns in excess of the returns to waiting. The total return of an asset can influence a firm’s decision to locate investment in one jurisdiction over another. This burden can be measured as an effective average tax rate but is beyond the scope of this report.

This analysis is limited to federal taxes. State and local taxes can significantly affect the overall tax burden on capital. Additionally, state and local property taxes can increase the burden on new investment at the firm level. Individuals also face state and local individual income taxes on their investment returns. State and local taxes are often deductible against federal taxes, which can also influence the overall burden on capital income.

**Data.** The CCC model contains data from the US Bureau of Economic Analysis’ National Income and Product Accounts on over 200 types of capital that fall into five major categories: equipment and software, structures, intellectual property, inventories, and land. The capital stock is further organized by legal form of organization (corporate and noncorporate businesses) and by North American Industry Classification System industry. This allows for estimates of effective marginal tax rates by industry, asset type, and business form.

**Parameters.** Tax parameters are calculated using PSL’s CCC and Tax-Calculator.<sup>20</sup> The methods in these models are generally consistent with the Congressional Budget Office’s 2005 and 2014 study “Taxing Capital Income.”<sup>21</sup> Table A1 contains key parameters used in the estimates.

At the entity level, the statutory tax rate on corporate profits is equal to the statutory corporate tax rate. The present value of depreciation deductions is first calculated for each asset life under current law and each simulation. The present values of these asset classes are then allocated to applicable assets for both corporations and noncorporate businesses. Inventories are split between those that use “last in, first out” (LIFO) and those that use “first in, first out (FIFO).” The share of interest deductible at the firm level is estimated using IRS data and the Joint Committee on Taxation’s revenue estimate of the 2017 Tax Act.

The marginal statutory tax rate on each source of capital income under current law and each simulation were estimated using PSL’s Tax-Calculator.<sup>22</sup> Tax-Calculator is an open-source microsimulation income and

**Table A2. Tax Status of Assets**

Asset	Tax Status
<b>Corporate Equity Income</b>	
<b>Nontaxable</b>	38.9%
<b>Temporarily Deferred</b>	3.9%
<b>Fully Taxable</b>	57.2%
<b>Corporate Debt</b>	
<b>Nontaxable</b>	32.8%
<b>Temporarily Deferred</b>	14.9%
<b>Fully Taxable</b>	52.3%
<b>Noncorporate Debt</b>	
<b>Nontaxable</b>	13.6%
<b>Temporarily Deferred</b>	10.1%
<b>Fully Taxable</b>	76.3%
<b>Taxable Capital Gains</b>	
<b>Percentage Short Term</b>	3.5%
<b>Holding Period (Years)</b>	0.33
<b>Percentage Long Term</b>	49.6%
<b>Holding Period (Years)</b>	8
<b>Percentage Held Until Death</b>	46.9%

Source: Congressional Budget Office.

term gains (held more than one year), and gains held until death.

The model requires several economic variables to calculate marginal effective tax rates: the inflation rate, the after-tax real return on corporate equity, and the Baa corporate bond rate. To maintain consistency with the Congressional Budget Office, I use the same economic parameters as its 2014 publication. These values are given in Table A3.

**Modeling Assumptions.** Biden’s campaign has not released enough details to fully model his proposals. As such, certain assumptions are made about each policy. In general, this analysis follows the modeling assumptions made by the Urban-Brookings Tax Policy Center.<sup>23</sup>

payroll tax calculator. Tax-Calculator uses the IRS’s Public Use File, which is a stratified random sample of US tax returns.

The tax rate on each source of capital income is the weighted average tax rate on the next dollar of that specific type of income (among all taxpayers with positive taxable income and at least a dollar of that specific dollar of income). As such, a weighted average marginal tax rate on capital gains of 21.5 percent means that across all taxpayers with taxable income and any capital gains, the next dollar of capital gains would be taxed at 21.5 percent.

This report adjusts the marginal statutory tax rates estimated from Tax-Calculator to account for tax-exempt retirement accounts and other tax-preferred saving. Each asset (corporate equity, corporate debt, and pass-through debt) is allocated into three tax treatments: fully taxable, temporarily deferred, and tax-exempt. The weights for each sector and type of income vary to account for differences in the use of tax-preferred accounts across sectors. The tax status of such assets is given in Table A2.

Taxable corporate equity is split again between dividends and capital gains. Capital gains are then split between short-term gains (held less than a year), long-

**Table A3. Economic Parameters**

<b>Inflation Rate</b>	2.40%
<b>Nominal Interest Rate Paid on Business Debt</b>	6.80%
<b>Expected After-Tax Return on Corporate Equity</b>	5.80%

Source: Congressional Budget Office.

Most of the proposals in Biden’s plan that would affect the taxation of capital were modeled for this analysis, except for a few policies due to data limitations. Proposals not modeled include the 15 percent minimum tax on book profits, the elimination of fossil fuel subsidies, the elimination of the deduction for direct-to-consumer drug advertising, and the restoration of green energy credits.

This analysis reflects Biden’s proposals as of July 2020.

## Notes

1. Kyle Pomerleau, Jason DeBacker, and Richard W. Evans, *An Analysis of Joe Biden's Tax Proposals*, American Enterprise Institute, June 15, 2020, <https://www.aei.org/research-products/report/an-analysis-of-joe-bidens-tax-proposals/>.
2. Pomerleau, DeBacker, and Evans, *An Analysis of Joe Biden's Tax Proposals*.
3. Cost-of-Capital-Calculator, <https://github.com/PSLmodels/Cost-of-Capital-Calculator#readme>.
4. Section 199A is scheduled to expire in 2026, along with most other income tax changes passed as part of the Tax Cuts and Jobs Act of 2017.
5. Bonus depreciation is scheduled to phase out between 2023 and 2027.
6. Gordon B. Mermin et al., "An Analysis of Former Vice President Biden's Tax Proposals," Tax Policy Center, March 5, 2020, <https://www.taxpolicycenter.org/publications/analysis-former-vice-president-bidens-tax-proposals>.
7. Mermin et al., "An Analysis of Former Vice President Biden's Tax Proposals."
8. Under current law, the lower top marginal tax rate, the repeal of the Pease provision, the higher alternative minimum tax exemptions, and the 20 percent pass-through deduction are all scheduled to expire. As such, these Biden proposals would only be in force until 2025.
9. Joseph W. Rosenberg and Donald B. Marron, "Tax Policy and Investment by Startups and Innovative Firms," Tax Policy Center, February 9, 2015, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2573259](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2573259).
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13. US Department of the Treasury, Office of Tax Analysis, "Effective Tax Rate Model," July 2014, <https://www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/New-Investment-Rates-Methodology.pdf>.
14. Congressional Budget Office, "Taxing Capital Income."
15. This does not necessarily mean that the government collects no revenue from businesses or savers. A consumption tax places no burden on marginal investments, or those that earn no profits in present value. However, a consumption tax will collect revenue from investments that yield profits in present value or super-normal returns.
16. The online tool provides a more detailed breakdown of the effective tax rates under current law and under Biden's proposals. Matt Jensen, Peter Metz, and Kyle Pomerleau, "Effective Tax Rates on Capital Under Current Law and Former Vice President Biden's Tax Proposal," Cost-of-Capital-Calculator, <https://ccc-biden.herokuapp.com/>.
17. Cost-of-Capital-Calculator, <https://github.com/kpomerleau/Cost-of-Capital-Calculator/tree/Tests>.
18. Robert E. Hall and Dale W. Jorgenson, "Tax Policy and Investment Behavior," *American Economic Review* 57, no. 3 (June 1967): 391–414, [https://www.jstor.org/stable/1812110?seq=1#metadata\\_info\\_tab\\_contents](https://www.jstor.org/stable/1812110?seq=1#metadata_info_tab_contents).
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20. Tax-Calculator, <https://github.com/PSLmodels/Tax-Calculator/blob/master/README.md>.
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