

A Comparison of Two Open-Source Tax Microsimulation Models

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A Comparison of Two Open-Source Tax Microsimulation Models

CRS has recently begun using two open-source microsimulation tax models to estimate the revenue effects of changes to federal tax law: the Budget Lab at Yale's (TBL's) Tax-Simulator and the Policy Simulation Library's (PSL's) Tax-Calculator. CRS uses these models to assist congressional offices early in the legislative process during work to inform congressional deliberations on tax policy. Any estimates produced by CRS are not considered official for revenue "scoring" purposes or compliance with budgetary rules. The Joint Committee on Taxation (JCT) is the official tax revenue estimator for Congress. CRS serves as shared staff to congressional committees and Members of Congress. The ability to provide unofficial revenue estimates contributes to the CRS mission of providing timely support to Congress throughout the legislative process.

This report first compares the two microsimulation models' estimates of selected tax expenditures with corresponding tax expenditure estimates published by the JCT. Second, it presents and compares both models' estimates of 11 hypothetical individual, payroll, and pass-through business tax changes. CRS selected these changes to demonstrate modeling capabilities across a broad range of potential policy options, and they are not intended to represent the estimated cost of any specific legislative proposal that has been introduced. Third, the report discusses how the models' aggregate baseline projections of individual income tax and payroll tax revenue compare with the Congressional Budget Office's (CBO's) projections and why they do not compare directly to one another. The report concludes with a brief discussion of the modeling limitations and considerations.

Estimating the revenue effects of changes to the federal tax code is inherently difficult. Microsimulation models like Tax-Simulator and Tax-Calculator combine a representative sample of taxpayer records (typically the IRS's 2015 Public Use File [PUF], supplemented and aged forward) with detailed tax-law calculators that apply current and alternative tax law scenarios to generate estimates. Differences in estimates across models can arise from differences in the assumptions used to age the data and impute missing data, the revenue baseline against which the estimates are computed, and the behavioral assumptions used to model taxpayer response to tax law changes. Differences between the models' estimates and the JCT estimates can be attributed to some of these same factors, along with the fact that the JCT has access to more recent confidential taxpayer data.

The revenue estimates produced by the TBL and PSL models may be useful to congressional offices as they draft or evaluate tax policy changes, particularly early in the legislative process when JCT estimates may not yet be available. The models are likely to produce results most comparable to potential JCT estimates when analyzing changes to broad features of the tax code, such as the marginal rate structure or income thresholds. The models' results may differ more substantially from the JCT's when estimating provisions relying on microdata that require significant data imputation and aging due to the models' use of a more dated primary data source (the 2015 PUF).

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Introduction

CRS has recently begun using two open-source microsimulation tax models to estimate the revenue effects of changes to federal tax law: the Budget Lab at Yale's (TBL's) Tax-Simulator and the Policy Simulation Library's (PSL's) Tax-Calculator. CRS uses these models to assist congressional offices early in the legislative process during work to inform congressional deliberations on tax policy. Both models are publicly available and used by various entities to produce estimates that may come to the attention of Members and committees. This CRS report may assist these Members and committees in evaluating any such estimates. For example, Members and committees may benefit from understanding how the estimates differ from one another and from those produced by Congress's official revenue estimators, the Joint Committee on Taxation (JCT) and the Congressional Budget Office (CBO).

This report first compares the two models' estimates of selected tax expenditures with corresponding tax expenditure estimates published by the JCT.¹ Second, it presents and compares the two models' estimates of changes to 11 hypothetical individual, payroll, and pass-through business taxes. CRS selected these changes to demonstrate the models' capabilities across a broad range of potential policy options, and they are not intended to represent the estimated cost of any specific legislative proposal that has been introduced. Third, it discusses how the models' aggregate baseline projections of individual income tax and payroll tax revenue compare with CBO's projections and why they do not directly compare with one another. The report concludes with a brief discussion of the modeling limitations and considerations.²

Please note that the JCT is the official tax revenue estimator for Congress, and any estimates produced by CRS are not considered official for revenue "scoring" purposes or compliance with budgetary rules.³ CRS serves as shared staff to congressional committees and Members of Congress. The ability to provide unofficial revenue estimates helps CRS carry out its mission of providing timely support to Congress throughout the legislative process.

¹ All estimates in this report attributed to Tax-Simulator or Tax-Calculator were made by CRS unless otherwise noted.

² Although this report highlights certain modeling assumptions and methodological approaches used by each model, a complete review of those aspects is not the focus of the report. The source code and supporting documentation is available via each entity's GitHub repositories: Tax-Calculator at <https://github.com/PSLmodels/Tax-Calculator> and Tax-Simulator at <https://github.com/Budget-Lab-Yale/Tax-Simulator>. Both Tax-Calculator and Tax-Simulator have associated repositories that construct the underlying microdata that is input into the models: <https://github.com/PSLmodels/tax-microdata-benchmarking> and <https://github.com/Budget-Lab-Yale/Tax-Data>. These associated repositories require the user to have a copy of the restricted-use 2015 IRS Public Use File. A copy may be obtained directly from the IRS at "SOI Tax Stats – Individual Public-Use Microdata Files," <https://www.irs.gov/statistics/soi-tax-stats-individual-public-use-microdata-files>. CRS is not permitted to provide this file. Tax-Calculator may also be run using the Current Population Survey (CPS), a nonrestricted-access data source. However, use of the CPS produces different estimates than those reported here and is recommended only for understanding the underlying tax logic of the model. For more information on using the CPS, see Policy Simulation Library, "Data for Tax-Calculator," <https://taxcalc.pslmodels.org/usage/data.html>.

³ Members of Congress may request revenue estimates and other analyses from the Joint Committee on Taxation (JCT) by following the procedures outlined at JCT, "Requesting Revenue Estimates and Other Analysis," <https://www.jct.gov/requests/>.

Comparison to JCT Estimates

Congress relies on the JCT to produce federal revenue estimates of proposed tax changes. The JCT also produces estimates of the revenue impact of current tax provisions known as “tax expenditures,” which are defined as⁴

those revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability.

This section compares the TBL and PSL models’ estimates of six selected tax expenditures with the JCT’s published estimates for 2026 and 2029 (**Table 1**). The JCT’s most recent estimates span FY2025 to FY2029. The tax expenditures presented are the 3.8% net investment income tax (NIIT), the child tax credit (CTC), reduced rates on long-term capital gains and qualified dividends, the 199A pass-through business deduction, deduction of state and local taxes (SALT), and the earned income tax credit (EITC). Positive values represent revenue *losses*; the estimated values for the NIIT are negative because this provision raises revenue. The estimates presented in **Table 1** were made using each model’s default settings and assumptions. Additional comparisons against estimates from the Department of the Treasury and the Tax Policy Center are presented in the **Appendix**.

Table 1. Comparison of Federal Tax Expenditure Estimates
(in billions of dollars)

	Capital Gains and Dividends		CTC		EITC		199A		NIIT		SALT	
	2026	2029	2026	2029	2026	2029	2026	2029	2026	2029	2026	2029
TBL	291.2	261.1	135.9	145.1	71.6	72.0	70.1	80.6	-57.3	-55.6	60.0	69.2
PSL	290.0	259.6	142.5	155.2	73.6	77.6	62.0	68.3	-75.7	-71.2	55.5	64.6
JCT	252.3	252.1	128.4	131.5	67.2	67.8	76.4	80.8	-61.4	-64.2	59.5	65.5

Source: CRS estimates using the Budget Lab at Yale’s (TBL’s) Tax-Simulator (Commit 18a25c8f0) and the Policy Simulation Library’s (PSL’s) Tax-Calculator (Release 6.7.2); and Joint Committee on Taxation (JCT) estimates.

Notes: TBL and JCT produce fiscal year estimates, while PSL produces calendar year estimates. Positive numbers indicate revenue losses, while negative numbers indicate revenue gains. CTC = child tax credit; EITC = earned income tax credit; 199A = Schedule 199A pass-through tax deduction; NIIT = net investment income tax; SALT = state and local tax deduction. The “Capital Gains and Dividends” column provides expenditure estimates for reduced rates on long-term capital gains and qualified dividends.

Across both years, the relationship between the models’ estimates and the JCT’s estimates falls into three patterns. For capital gains and dividends, the two models’ estimates are similar to each other and diverge from the JCT’s estimates by similar margins; both are about 15% above the JCT’s estimates in 2026, falling to 3% and 4% above the JCT’s estimates in 2029.

⁴ Section 3(3) of the Congressional Budget and Impoundment Control Act of 1974. For more information on tax expenditures, see U.S. Congress, Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2025-2029*, 119th Cong., 1st sess., December 3, 2025, JCX-45-25; and U.S. Congress, Senate Budget Committee, *Tax Expenditures: Compendium of Background Material on Individual Provisions*, committee print, prepared by Congressional Research Service, 118th Cong., 2nd sess., December 2024, S. Prt. 118-28 (GPO, 2025).

For the CTC, EITC, and 199A deduction, the models' estimates diverge from the JCT's estimates in the same direction but by different degrees, with PSL's difference with the JCT's consistently larger than TBL's. Both models' estimates for the CTC are above the JCT's, with TBL's about 6% above the JCT's in 2026 and 10% above in 2029, and PSL's about 11% above the JCT's in 2026 and 18% above in 2029. Likewise, both models' estimates for the EITC are above the JCT's, with TBL's about 7% higher in 2026 and 6% higher in 2029, while PSL's is about 10% higher in 2026 and 15% higher in 2029. Both models' estimates for the 199A deduction are below the JCT's, with TBL's about 8% lower in 2026 and 0.2% lower in 2029, while PSL's is about 19% lower in 2026 and 15% lower in 2029.

For the NIIT and SALT provisions, the models' estimates diverge from the JCT's estimates in opposing directions. For the NIIT, TBL estimates about a 7% smaller revenue impact than the JCT estimates in 2026 and a 14% smaller revenue impact in 2029, while PSL projects about a 23% larger revenue impact in 2026 and about an 11% larger impact in 2029. The SALT deduction displays a similar pattern but on a smaller scale. TBL's estimate is about 1% higher than the JCT's in 2026 and 6% higher in 2029, while PSL's is about 7% lower than the JCT's in 2026 and 1% lower in 2029.

Estimates of Selected Tax Changes

Table 2 presents the TBL and PSL models' estimated revenue effects for 11 selected tax changes. The revenue effects are measured as the revenue gain or loss relative to a current law baseline. It is assumed that each change took effect on January 1, 2026. Because TBL's Tax-Simulator produces fiscal year (FY) estimates, while PSL's Tax-Calculator produces calendar year (CY) estimates, the two models' annual figures are not perfectly aligned, but the calendar year versus fiscal year difference does not generate meaningful differences between model estimates. The estimates presented in **Table 2** were made using each model's default settings and assumptions. A brief description of current law and each of the modeled changes follows, along with a short observation about the corresponding estimates.

Table 2. Comparison of Estimates of Effects of Selected Tax Changes on Federal Tax Revenues, 2026-2035

(in billions of dollars)

Option	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
<i>Increase top rate to 39.6%</i>											
TBL	29.8	39.2	40.6	42.9	45.2	47.5	49.9	52.2	54.7	57.3	459.4
PSL	41.1	41.6	42.2	43.1	44.5	46.3	48.3	50.4	52.6	54.9	465.0
<i>Reduce all ordinary rates by 2 percentage points</i>											
TBL	-182.2	-246.2	-256.3	-273.3	-290.0	-303.2	-315.7	-328.5	-342.0	-356.2	-2,893.7
PSL	-236.7	-245.4	-254.4	-272.5	-290.5	-301.7	-313.3	-325.1	-337.3	-350.0	-2,926.7
<i>Tax capital gains/dividends as ordinary income</i>											
TBL	291.2	281.2	266.9	261.1	264.4	271.3	280.6	291.2	303.2	315.9	2,827.3
PSL	290.0	279.3	265.0	259.6	261.2	266.2	273.5	282.3	292.1	302.7	2,771.8
<i>Reduce capital gains/dividend tax to 18%</i>											
TBL	-22.1	-22.3	-21.1	-20.6	-20.7	-21.1	-21.8	-22.6	-23.5	-24.4	-220.2
PSL	-12.2	-11.9	-11.5	-11.4	-11.5	-11.8	-12.3	-12.7	-13.2	-13.8	-122.3
<i>Increase 199A deduction to 25%</i>											
TBL	-12.9	-17.5	-18.0	-19.0	-19.9	-20.7	-21.5	-22.3	-23.1	-24.0	-198.9
PSL	-5.8	-6.0	-6.1	-6.4	-6.5	-6.7	-7.0	-7.2	-7.4	-7.6	-66.7
<i>Cap SALT deduction at \$10,000</i>											
TBL	27.5	37.4	39.1	41.4	9.9	0.0	0.0	0.0	0.0	0.0	155.4
PSL	37.4	39.7	42.1	44.7	0.0	0.0	0.0	0.0	0.0	0.0	163.9
<i>Reduce SALT marriage penalty and make expansion permanent</i>											
TBL	-16.4	-22.1	-23.2	-24.4	-58.7	-71.1	-73.8	-76.6	-79.6	-82.5	-528.4
PSL	-21.7	-22.6	-23.6	-24.8	-82.0	-86.3	-90.7	-95.2	-99.8	-104.6	-651.3

Option	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
<i>Increase NIIT income thresholds and inflation-adjust thereafter</i>											
TBL	-3.9	-4.9	-5.2	-5.6	-6.0	-6.6	-7.1	-7.7	-8.4	-9.1	-64.6
PSL	-5.6	-6.0	-6.4	-6.8	-7.3	-7.9	-8.6	-9.4	-10.2	-11.0	-79.2
<i>Tax active income of partnerships and S corps with NIIT</i>											
TBL	19.9	27.4	28.3	30.2	31.9	33.5	35.1	36.7	38.4	40.1	321.6
PSL	45.8	45.8	45.8	46.1	47.3	49.2	51.4	53.8	56.3	59.0	500.5
<i>Make CDCTC refundable</i>											
TBL	-2.4	-2.2	-2.1	-2.0	-1.9	-1.9	-1.8	-1.8	-1.7	-1.7	-19.6
PSL	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-7.4
<i>Remove Social Security income cap</i>											
TBL	153.0	212.0	220.7	229.8	239.9	249.6	259.6	269.4	278.9	289.5	2,402.4
Payroll	179.2	248.0	258.3	269.2	280.8	292.3	304.0	315.7	327.0	339.6	2,814.0
Individual	-26.2	-36.0	-37.6	-39.3	-40.9	-42.6	-44.5	-46.3	-48.1	-50.1	-411.7
PSL	243.0	252.7	261.7	270.9	280.6	290.4	300.1	310.3	320.8	331.6	2,862.0
Payroll	246.1	255.8	265.0	274.4	284.2	294.2	304.1	314.4	325.1	336.1	2,899.5
Individual	-3.0	-3.2	-3.3	-3.5	-3.6	-3.8	-4.0	-4.1	-4.3	-4.5	-37.4

Source: CRS estimates using the Budget Lab at Yale's (TBL's) Tax-Simulator (Commit 18a25c8f0) and the Policy Simulation Library's (PSL's) Tax-Calculator (Release 6.7.2).

Notes: Revenue effects are measured as the revenue gain or loss relative to a current law baseline. Positive numbers indicate revenue gains, while negative numbers indicate revenue losses. See text for a full description of each proposal. TBL produces fiscal year estimates; PSL produces calendar year estimates. SALT = state and local tax deduction; 199A = Schedule 199A pass-through tax deduction; NIIT = net investment income tax; CDCTC = child and dependent care tax credit.

Increase top individual income tax rate from 37% to 39.6%

Under current law, the federal individual income tax is imposed according to a graduated schedule consisting of seven marginal rates: 10%, 12%, 22%, 24%, 32%, 35%, and 37%.⁵ This rate structure stems from the 2017 tax law (P.L. 115-97), also known as the Tax Cuts and Jobs Act (TCJA). These rates are applied to successive ranges of taxable income (i.e., “brackets”) that vary by filing status and that are adjusted annually for inflation. Before the TCJA, the top marginal tax rate was 39.6%; this rate was established by the Omnibus Budget Reconciliation Act of 1993 (P.L. 103-66) and extended for the highest-income earners by the American Taxpayer Relief Act of 2012 (P.L. 112-240). The TCJA rate schedule was set to expire after 2025 and would have reverted to 39.6%, but the FY2025 reconciliation law, commonly known as the One Big Beautiful Bill Act (P.L. 119-21), made the TCJA rate schedule permanent.

This option would increase the top marginal individual income tax rate from 37% to 39.6% while leaving the other six marginal rates and income brackets unchanged.

The two models produce similar estimates: TBL projects a revenue gain of \$459 billion over FY2026-FY2035, and PSL projects a revenue gain of \$465 billion over CY2026-CY2035, an approximately 1% larger revenue gain than TBL projects.⁶

Reduce all individual ordinary income tax rates by 2 percentage points

Under current law, as described above, the federal individual income tax is imposed according to a graduated schedule consisting of seven marginal rates: 10%, 12%, 22%, 24%, 32%, 35%, and 37%. These rates are applied to successive brackets that vary by filing status and that are adjusted annually for inflation.⁷

This option would reduce each of the seven marginal tax rates by 2 percentage points, producing a new graduated rate schedule of 8%, 10%, 20%, 22%, 30%, 33%, and 35%. The associated income tax brackets and inflation indexing would remain unchanged.

The two models produce nearly identical estimates: TBL projects a revenue loss of \$2,894 billion over FY2026-FY2035, and PSL projects a revenue loss of \$2,927 billion over CY2026-CY2035, an approximately 1% larger revenue loss than TBL projects.

Tax long-term capital gains and qualified dividends as ordinary income

Under current law, long-term capital gains (on assets held for more than a year) and qualified dividends are taxed at rates (0%, 15%, and 20%) that are lower than those imposed on ordinary

⁵ Internal Revenue Code (IRC) Section 1. See also CRS Report RL34498, *Federal Individual Income Tax Brackets, Standard Deductions, and Personal Exemption: 1988 to 2026*, by Nicholas E. Buffie and Brendan McDermott.

⁶ Percent differences in this section are expressed relative to the Budget Lab at Yale’s (TBL’s) estimates solely for purposes of making comparisons, not as an indication that CRS views the TBL model as more accurate than the PSL model.

⁷ Internal Revenue Code (IRC) Section 1. See also CRS Report RL34498, *Federal Individual Income Tax Brackets, Standard Deductions, and Personal Exemption: 1988 to 2026*, by Nicholas E. Buffie and Brendan McDermott.

income (up to 37%).⁸ Short-term capital gains and nonqualified dividends are taxed as ordinary income. Certain higher-income taxpayers (with incomes over \$200,000 if single or over \$250,000 if married and filing jointly) are subject to an additional 3.8% net investment income tax (NIIT) on short-term and long-term capital gains, qualified and nonqualified dividends, and other types of passive capital income. The current preferential rates on long-term capital gains were established by the American Taxpayer Relief Act of 2012 (P.L. 112-240), and the current preferential rates on qualified dividends were established by the Growth Tax Relief Reconciliation Act of 2003 (P.L. 108-27).

This option would eliminate the preferential tax rates on long-term capital gains and qualified dividends and would instead tax them as ordinary income. The 3.8% NIIT would still apply to certain higher-income taxpayers, raising the top combined marginal tax rate on long-term capital gains and qualified dividends to 40.8%.

The two models produce similar estimates: TBL projects a revenue gain of \$2,827 billion over FY2026-FY2035, and PSL projects a revenue gain of \$2,772 billion over CY2026-CY2035, an approximately 2% smaller revenue gain than TBL projects.

Reduce the top rate on long-term capital gains and qualified dividends from 20% to 18%

Under current law described above, long-term capital gains (on assets held for more than a year) and qualified dividends are taxed at rates (0%, 15%, and 20%) that are lower than those imposed on ordinary income (up to 37%).⁹ Certain higher-income taxpayers (with incomes over \$200,000 if single or over \$250,000 if married and filing jointly) are subject to an additional 3.8% net investment income tax (NIIT) on capital gains, dividends, and other types of passive capital income.

This option would reduce the top rate on long-term capital gains and qualified dividends from 20% to 18%. The 3.8% NIIT would still apply to certain higher-income taxpayers, resulting in a top combined marginal tax rate on long-term capital gains and qualified dividends of 21.8%.

The two models diverge noticeably in their estimates: TBL projects a revenue loss of \$220 billion over FY2026-FY2035, and PSL projects a revenue loss of \$122 billion over CY2026-CY2035, an approximately 44% smaller revenue loss than TBL projects. The difference in estimates is likely explained by the estimation of capital gains needed to construct the underlying microdata, which is difficult especially due to the age of the data that are the starting point nearly all modelers use for tax microsimulation estimates.¹⁰

The two models also differ in their default assumption of how taxpayers respond to a change in the capital gain tax rate. TBL assumes a realization elasticity of -0.62, whereas PSL's default

⁸ For more information on capital gains taxation, see CRS Report R47113, *Capital Gains Taxes: An Overview of the Issues*, by Jane G. Gravelle; CRS Report R41364, *Capital Gains Tax Options: Behavioral Responses and Revenues*, by Jane G. Gravelle; CRS Report R48562, *Boundaries on the Long-Run Realization Response to Changes in Capital Gains Taxes*, by Mark P. Keightley and Jane G. Gravelle; CRS Report R45229, *Indexing Capital Gains Taxes for Inflation*, by Jane G. Gravelle; CRS In Focus IF13231, *Indexing Capital Gains Taxes for Inflation: Marginal Effective Tax Rates and Revenue Estimates*, by Jane G. Gravelle and Mark P. Keightley; CRS In Focus IF11812, *Tax Treatment of Capital Gains at Death*, by Jane G. Gravelle; and CRS In Focus IF11957, *Mark-to-Market Taxation of Capital Gains*, by Jane G. Gravelle.

⁹ CRS Report R47113, *Capital Gains Taxes: An Overview of the Issues*, by Jane G. Gravelle.

¹⁰ See the "Considerations" section for a discussion of this.

elasticity is zero.¹¹ Both models allow for changing the default elasticities, but setting the elasticities in either model to the other's default would lead the difference in the estimates to widen, suggesting it is the difference in the models' capital gains microdata estimates that is driving the difference in revenue estimates.¹²

Increase the Section 199A pass-through deduction from 20% to 25%

Internal Revenue Code (IRC) Section 199A allows pass-through business owners (sole proprietorships, partnerships, S corporations, and certain trusts) to deduct up to 20% of their qualified business income (QBI) when determining their taxable income.¹³ The effect of the deduction is thus to reduce the owner's effective marginal tax rate by 20%. For example, if the owner faced a 37% tax rate, the effective tax rate would be 29.6%, computed as 37% multiplied by $(1 - 0.20)$. The deduction was first created as a temporary provision by the TCJA. It was previously set to expire at the end of 2025 but was made permanent by the FY2025 reconciliation law, as noted above.

This option would increase the Section 199A deduction rate from 20% to 25% while leaving the other parameters of the provision unchanged.

The two models diverge noticeably in their estimates: TBL projects a revenue loss of \$199 billion over FY2026-FY2035, and PSL projects a revenue loss of \$67 billion over CY2026-CY2035, an approximately 67% smaller revenue loss than TBL projects. Estimating the revenue effects of changes to the 199A deduction presents modeling challenges that are greater than for most other tax provisions. The deduction's value depends on business-level inputs that are not directly reported in the 2015 Public Use File (the data source that both models use to construct their models of the taxpaying population) and therefore must be imputed. Users may want to treat both models' estimates of changes to 199A with more caution than they would for more straightforward changes such as rate changes.

Cap SALT deduction at \$10,000

Filers who itemize their deductions can deduct certain taxes they paid to state and local governments.¹⁴ Statute has capped the amount that individual income tax filers could claim for this deduction since 2018. The TCJA limited this deduction to \$10,000 per filer (\$5,000 for those married filing separately) for tax years 2018-2024. The FY2025 reconciliation law raised the maximum cap to \$40,000 per filer (\$20,000 for those married filing separately) for tax year 2025. The cap is decreased by 30% of the amount by which the filer's modified adjusted gross income exceeds \$500,000 (\$250,000 for those married filing separately) until reaching \$10,000 (\$5,000 for married separate filers). Both the \$40,000-per-filer limit and the \$500,000 threshold (and

¹¹ For more information on PSL's behavioral options, see <https://github.com/PSLmodels/Behavioral-Responses>.

¹² A capital gains tax elasticity of zero means there is no behavioral response on the part of taxpayers to a tax cut (static estimate); the taxpayers realize the same amount of gains as they would have without the tax cut. A negative elasticity means taxpayers respond to a tax cut by realizing more capital gains, which results in the tax cut being offset. An elasticity of -1 would lead to a tax cut being entirely offset (no revenue loss), and below -1 the tax cut would generate revenue.

¹³ For more information on the Section 199A pass-through deduction, see CRS In Focus IF12838, *Selected Issues in Tax Policy: Section 199A Deduction for Pass-Through Business Income*, by Mark P. Keightley.

¹⁴ For more information on the state and local tax (SALT) deduction, see CRS Report R46246, *The SALT Cap: Overview and Analysis*, by Grant A. Driessen, and CRS Report R48611, *Tax Provisions in P.L. 119-21, the FY2025 Reconciliation Law*, coordinated by Anthony A. Cilluffo.

equivalents for married separate filers) are scheduled to increase by 1 percentage point per year through 2029. From 2030 onward, the cap is scheduled to return to \$10,000 (\$5,000 for separate filers) regardless of the filer's income.

This option would repeal the increase in the cap for tax years 2026-2029. The cap would be \$10,000 for most filers and \$5,000 for married separate filers regardless of income, with no annual adjustment for inflation.

The two models produce similar estimates: TBL projects a revenue gain of \$155 billion over FY2026-FY2035, and PSL projects a revenue gain of \$164 billion over CY2026-CY2035, an approximately 5% smaller revenue loss than TBL projects. Because the cap is already set to return to \$10,000 starting in 2030 under law, this option raises revenue only in 2026-2029 (and partly in 2030 for TBL's projection on a fiscal-year basis).

Reduce SALT marriage penalty and make the FY2025 reconciliation law expansion permanent

The SALT deduction cap is adjusted for married separate filers, but not for any other filing statuses. As a result, two individuals could potentially receive a larger deduction if unmarried. For example, two single individuals can each claim a deduction of up to \$40,400 in 2026, or \$80,800 total, while a married couple could only claim a maximum deduction of \$40,400. Circumstances in which individuals can pay less tax on the same total income if unmarried than married are known as "marriage penalties."

This option would reduce the marriage penalty associated with the SALT cap by doubling the maximum deduction for married joint filers relative to current law, as well as doubling the deduction for married separate filers to equal that of single and head-of-household filers. For years 2026-2029, it would also double the threshold at which the higher maximum cap begins to phase out for married joint filers relative to current law. It would then hold the cap steady at its 2029 levels permanently, rather than reverting to \$10,000 in 2030 or having parameters continue to rise by 1 percentage point each year.

The two models diverge noticeably in their estimates: TBL projects a revenue loss of \$528 billion over FY2026-FY2035, and PSL projects a revenue loss of \$651 billion over CY2026-CY2035, an approximately 23% larger revenue loss than TBL projects. Both models show sharp increases in the revenue loss (relative to current law baseline) beginning in 2030 when the cap is set to return to \$10,000 under current law.

Increase NIIT income thresholds and index for inflation

Since 2013, certain higher-income individuals have been subject to a 3.8% "unearned income Medicare contribution" tax, more commonly referred to as the net investment income tax (NIIT).¹⁵ The statutory authority for the tax is included in IRC Section 1411. The NIIT is equal to 3.8% of the net investment income of individuals, estates, and certain trusts. Net investment income includes interest, dividends, annuities, royalties, certain rents, and certain other passive business income not subject to the corporate tax. Net investment income also includes the amount of capital gain resulting from a home sale that exceeds the amount that can be excluded from taxation (\$250,000 for single and head-of-household filers, \$500,000 for married joint filers). Net

¹⁵ For more information on the net investment income tax (NIIT), see CRS In Focus IF11820, *The 3.8% Net Investment Income Tax: Overview, Data, and Policy Options*, by Mark P. Keightley.

investment income does not include wages, unemployment compensation, nonpassive business income, Social Security benefits, alimony, tax-exempt interest, and distributions from some tax-preferred retirement accounts—for example, 401(k)s, 403(b)s, and 457(b)s.

The tax applies to taxpayers with modified adjusted gross income (MAGI) in excess of \$200,000 if single or head of household, \$250,000 if married filing jointly, and \$125,000 for married filing separately. The income thresholds are not adjusted annually for inflation.

This option would increase the NIIT income thresholds to \$275,000 if single or head of household, \$345,000 if married filing jointly, and \$172,500 if married filing separately. These increases are approximately equal to what the original income thresholds would be in 2026 if they had been indexed for inflation, assuming 2.5% inflation. This option would also inflation-index the income thresholds going forward.

The two models diverge noticeably in their estimates: TBL projects a revenue loss of \$65 billion over FY2026-FY2035, and PSL projects a revenue loss of \$79 billion over CY2026-CY2035, an approximately 23% larger revenue loss than TBL projects.

Subject active income of partnerships and S corporations to the NIIT

As described above, the NIIT generally applies to net investment income and certain passive business income that is not subject to the corporate tax. But the NIIT does not apply to the active income of partners or S corporation shareholders, with “active income” referring to income earned by a partner or shareholder who materially participates in the business. Additionally, limited partners and S corporation shareholders are generally not subject to the Self-Employment Contributions Act (SECA) tax on their distributive shares of income. Thus, a portion of pass-through business income, typically flowing to higher-income owners, is not subject to the NIIT or the SECA tax.

This proposal would subject the active income of partnerships and S corporation owners to the NIIT. This proposal does not alter the current NIIT income thresholds.

The two models diverge noticeably in their estimates: TBL projects a revenue gain of \$322 billion over FY2026-FY2035, and PSL projects a revenue gain of \$501 billion over CY2026-CY2035, an approximately 56% larger revenue gain than TBL projects.

Make child and dependent care tax credit refundable

The child and dependent care tax credit (CDCTC) offsets some of the out-of-pocket expenses working families incur for child or dependent care that allows those with dependents to work or look for work.¹⁶ The credit is nonrefundable, meaning it can reduce a filer’s income tax liability to \$0, but the filer cannot receive a refund for any credit remaining after offsetting income taxes. The credit is worth the amount spent (up to \$3,000 for one person cared for, or \$6,000 for two or more) times a credit rate, which ranges from 50% for the lowest-earning households to 20% for those highest on the income spectrum.

¹⁶ For more information on the child and dependent care tax credit (CDCTC), see CRS Report R44993, *Child and Dependent Care Tax Benefits: How They Work and Who Receives Them*, and CRS Report R48611, *Tax Provisions in P.L. 119-21, the FY2025 Reconciliation Law*, coordinated by Anthony A. Cilluffo.

This option would make the CDCTC refundable for tax years 2026 onward. Households whose credit exceeds their income tax liability could receive the remainder of their credit as a tax refund, making its full value available to the lowest-earning families.

The two models diverge noticeably in their estimates: TBL projects a revenue loss of \$20 billion over FY2026-FY2035, and PSL projects a revenue loss of \$7 billion over CY2026-CY2035, an approximately 62% smaller revenue loss than TBL projects.

Remove the cap on income subject to the Social Security tax

Under current law, the Social Security (Old-Age, Survivors, and Disability Insurance, or OASDI) portion of payroll taxes applies only to earnings up an annual cap, which is \$184,500 for 2026 and is indexed for average wage growth. This cap applies to both the 6.2% tax for employee and the 6.2% tax for the employer, and to the entire 12.4% for self-employed individuals. There is no income cap on the Medicare portion of payroll taxes.

This option would remove the cap on income subject to Social Security, subjecting all wages and self-employment income to the 12.4% OASDI tax rate. Due to the interaction between the individual income tax and the payroll tax, there are revenue implications for both.

TBL projects a total revenue gain of \$2,402 billion over FY2026-FY2035, and PSL projects a revenue gain of \$2,862 billion over CY2026-CY2035, an approximately 20% larger gain than TBL projects. That total comprises the combined effects on individual and payroll tax revenues. TBL projects a gain of payroll tax revenues of \$2,814 billion over FY2026-FY2035, and PSL projects a gain of payroll tax revenues of \$2,900 billion over CY2026-CY2035, an approximately 3% larger revenue gain than TBL projects. TBL projects a *loss* of *individual* tax revenues of \$412 billion over FY2026-FY2035, and PSL projects a *loss* of *individual* tax revenues of \$37 billion over CY2026-CY2035, an approximately 91% smaller loss than TBL projects. The fact that both models produce a revenue loss is due to current law, but the much larger revenue loss produced by TBL is due to an additional modeling assumption that is absent from the PSL model.

Under current law, self-employed individuals can deduct half of their self-employment (SECA) tax when computing their adjusted gross income. The SECA tax is the self-employed equivalent of the Social Security tax and the same income cap applies. If the cap on income subject to Social Security tax is removed, self-employed individuals with earnings above the old cap would owe more SECA tax on that additional income. Half of that additional tax would be deductible against income, which in turn would reduce individual income taxes. Both models capture this feature of current law.

The TBL estimates also reflect an assumption that total compensation (wages, nontaxable benefits, and employer-paid taxes) is fixed.¹⁷ This implies that when the employer's share of payroll taxes goes up due to the removal of the cap on income subject to Social Security taxes, either employee wages or benefits (or both) must fall. TBL assumes that wages absorb 85% of the compensation reduction, and benefits absorb 15%. The reduction in wages leads to less individual income tax being collected.

¹⁷ Per CRS conversations with the Budget Lab at Yale and review of their source code. The JCT and the Congressional Budget Office (CBO) make a similar assumption. See CBO, *Options for Reducing the Deficit: 2019 to 2028*, "Increase the Payroll Tax Rate for Social Security," December 18, 2018, <https://www.cbo.gov/budget-options/54805>.

Comparison to CBO Baseline Revenue Projections

CBO publishes current-law baseline revenue projections as part of its *Budget and Economic Outlook* reports, which are typically released twice a year.¹⁸ The JCT relies on CBO's baseline revenue projection to estimate the cost of tax policy changes as the difference between current-law baseline and the policy baseline. The TBL Tax-Simulator and PSL Tax-Calculator also produce baseline revenue projections for the same reason. However, Tax-Simulator and Tax-Calculator are not designed, nor are they intended, to replicate CBO's published revenue projections. Their aggregate baseline outputs are not directly comparable to those projections because they do not include the same ranges of revenue sources.¹⁹

For individual income taxes, Tax-Simulator and Tax-Calculator simulate the universe of taxpayers filing Form 1040 and produce calendar-year tax liabilities.²⁰ When the models' outputs are compared against CBO's microsimulation estimates for the same Form 1040 universe, both models produce estimates similar to CBO's.²¹ CBO's published baseline projections of total individual income tax revenues, however, reflect total Treasury cash receipts and include items outside the 1040 universe: income taxes paid by estates and trusts, withholding on foreign payments, certain timing differences, and other items the models do not compute. The fact that the models align with CBO's 1040 estimates and apply the same definitions in both their current-law and policy-change estimates indicates that cost estimates produced by either are still valid; the items the models omit are absent from both runs and therefore do not directly influence cost estimates that are measured as the difference between the modeled scenario and current law.²²

For payroll taxes, Tax-Simulator and Tax-Calculator model only the Social Security (Old-Age, Survivors, and Disability Insurance, or OASDI) and Medicare (Hospital Insurance) components. In contrast, CBO's baseline payroll tax revenue projections include the OASDI and Medicare components plus payroll taxes for federal unemployment insurance, the federal employee retirement program, and the federal railroad retirement program. Since none of these three items are currently modeled by Tax-Simulator or Tax-Calculator, the models' payroll projections necessarily fall below CBO's headline figures.²³ Because the models apply the same payroll measures in both their current-law and policy-change baselines, their estimated revenue impacts are still valid.

¹⁸ See CBO, *The Budget and Economic Outlook: 2026 to 2036*, February 2026, <https://www.cbo.gov/publication/61882>; and Key Budget and Economic Data at <https://www.cbo.gov/data/budget-economic-data>.

¹⁹ Over 2026-2035, both models' individual income tax projections run roughly 9% below CBO's, and their payroll projections run approximately 7% (TBL) to 11% (PSL) below.

²⁰ Tax-Simulator adjusts these calendar year tax liabilities to produce fiscal year revenue estimates.

²¹ For more information, see PSL's tax-microdata-benchmarking repository, GitHub Issue #502, <https://github.com/PSLmodels/tax-microdata-benchmarking/issues/502>, and Pull Request #515, <https://github.com/PSLmodels/tax-microdata-benchmarking/pull/515>. Tax-Simulator outputs a file that compares its microdata against CBO's individual income tax microsimulation projections.

²² Tax-Calculator also verifies its tax logic by comparisons to the National Bureau of Economic Research's (NBER's) TAXSIM. See <https://github.com/PSLmodels/Tax-Calculator/tree/master/taxcalc/validation>. A similar validation approach is tagged as a future TBL project (according to TBL in conversation with CRS).

²³ TBL also provided CRS a decomposition of the factors contributing to the gap between Tax-Simulator and CBO payroll projections; the decomposition indicates that wage-modeling differences are also a factor.

Considerations

Estimating the revenue effects of changes to the federal tax code is inherently difficult. Microsimulation models like Tax-Simulator and Tax-Calculator combine a representative sample of taxpayer records (typically the IRS's 2015 Public Use File, supplemented and aged forward) with detailed tax-law calculators that apply current and alternative tax law scenarios. Differences across models can arise from differences in the assumptions used to age the data and impute missing data, the revenue baseline against which the estimates are computed, and the behavioral assumptions used to model taxpayer response to tax law changes. Differences between the models' estimates and the JCT's estimates can be attributed to some of these same factors and to the fact that the JCT has access to more recent confidential taxpayer data.

The revenue estimates produced by the TBL and PSL models may be useful to congressional offices as they draft or evaluate tax policy changes, particularly early in the legislative process when JCT estimates may not yet be available. The models are likely to produce results most comparable to potential JCT estimates when analyzing changes to broad features of the tax code, such as the marginal rate structure or adjusting income thresholds. They may differ more substantially from JCT when estimating provisions relying on microdata that require significant data imputation and aging due to the decade-old primary data source (the 2015 PUF). The estimates presented of reduction in the capital gains rate to 18% and the increase in the 199A deduction to 25% illustrate this possibility.

As noted, the JCT produces the official revenues estimated for congressional scorekeeping and compliance with budgetary rules. The JCT has access to confidential taxpayer microdata and modeling resources that are not available to outside modelers. The estimates produced by Tax-Simulator and Tax-Calculator should therefore not be interpreted as substitutes for JCT estimates. Rather, the models are complementary to the JCT's work and allow CRS (and others) to provide unofficial estimates that congressional offices can use to compare options during the policy development process and to give a sense of the range of potential estimates the JCT could provide.

Appendix. Additional Comparisons with Other Estimates

Table A-1. Comparison of Federal Tax Expenditure Estimates
(in billions of dollars)

	Capital Gains and Dividends		CTC		EITC		199A		NIIT		SALT	
	2026	2029	2026	2029	2026	2029	2026	2029	2026	2029	2026	2029
TBL	291.2	261.1	135.9	145.1	71.6	72.0	70.1	80.6	-57.3	-55.6	60.0	69.2
PSL	290.0	259.6	142.5	155.2	73.6	77.6	62.0	68.3	-75.7	-71.2	55.6	64.6
JCT	252.3	252.1	128.4	131.5	67.2	67.8	76.4	80.8	-61.4	-64.2	59.5	65.5
Treasury	171.8	189.9	91.1	102.7	69.5	76.4	68.1	80.1	N/A	N/A	51.9	56.7
TPC	199.3	N/A	131.6	N/A	71.6	N/A	75.5	N/A	-46.4	N/A	54.2	N/A

Source: CRS estimates using the Budget Lab at Yale's (TBL's) Tax-Simulator (Commit 18a25c8f0) and the Policy Simulation Library's (PSL's) Tax-Calculator (Release 6.7.2); and estimates from the Joint Committee on Taxation (JCT), the Department of the Treasury (Treasury), and the Tax Policy Center (TPC).

Notes: TBL, JCT, and Treasury produce fiscal year estimates, while PSL and TPC produce calendar year estimates. Positive numbers indicate revenue losses, while negative numbers indicate revenue gains. Treasury does not estimate the revenue associated with the net investment income tax (NIIT) as a tax expenditure. TPC does not estimate tax expenditures for 2029. CTC = child tax credit; 199A = Schedule 199A pass-through tax deduction; SALT = state and local tax deduction; EITC = earned income tax credit. The "Capital Gains and Dividends" column provides expenditure estimates for reduced rates on long-term capital gains and qualified dividends.

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