



**TAX POLICY CENTER**  
URBAN INSTITUTE & BROOKINGS INSTITUTION

## THE TAX REFORM TRADE-OFF: ELIMINATING TAX EXPENDITURES, REDUCING RATES (PART 2)

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### ABSTRACT

In Part 1 of this exercise, TPC estimated the revenue and distributional effects of proposals that would eliminate almost all income tax expenditures to lower individual and corporate tax rates and maintain long-run revenue neutrality for the Federal tax system. The results of Part 1 showed that individual and corporate income tax rates could be substantially reduced while meeting the dual constraints of long-run revenue neutrality and maintaining the distributional consequences of the current tax system.

Part 2 of this exercise restores several tax expenditures and calculates the income tax rates necessary to maintain long-run revenue neutrality. This portion of the exercise illustrates a drawback of considering tax expenditures in isolation: that approach ignores interaction effects between tax expenditures.

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## OVERVIEW

The Urban-Brookings Tax Policy Center (TPC) analyzed a series of proposals to help illustrate how eliminating income tax expenditures could finance lower tax rates. To achieve long-run revenue neutrality (defined as raising the same revenue as under current law in FY 2037) and approximate distributional neutrality, the individual income tax schedule could be changed to include a zero bracket and rates of 5 percent, 16 percent, and 29.9 percent. The same type of exercise related to corporate tax expenditures could reduce the corporate income tax rate to 26 percent.

If specific tax expenditures were added back, income tax rates would have to be higher than the base case to maintain long-run revenue neutrality. To illustrate these effects, TPC did such calculations for the following tax expenditures or groups of individual income tax expenditures:

- itemized deduction for mortgage interest
- itemized deduction for state and local taxes
- tax expenditures for retirement
- tax expenditures for health

Addressing tax expenditures individually would affect the distribution across income levels because the benefits are not evenly taken by all taxpayers. In addition, interaction effects among the expenditures could further increase rates significantly. For example, restoring both the mortgage interest deduction and the state and local tax deduction would require the highest rate to be 0.7 percentage points higher than if these two deductions were separately restored.

On the corporate income tax side, if tax expenditures for research and experimentation were added back, the revenue-neutral corporate income tax rate would increase from 26 percent to 27.1 percent. The overall distribution of tax burdens would also shift somewhat.

## ELIMINATE TAX EXPENDITURES WITH A REVENUE TARGET

The analysis starts by eliminating virtually all individual and corporate income tax expenditures except for three specific tax expenditures that benefit lower- and middle-income families: the earned income tax credit (EITC), the child tax credit (CTC), and the partial income exclusion for social security benefits. Specifically, the exercise

- a) repeals the individual alternative minimum tax (AMT), the net investment income tax, the personal exemption phase-out, and the limitation on itemized deductions;
- b) lowers individual income tax rates;

- c) collapses the number of individual income tax brackets from seven to three<sup>1</sup>;
- d) eliminates all individual income tax expenditures except for the EITC, the CTC, and the partial income exclusion for social security benefits;
- e) repeals the corporate AMT;
- f) lowers the corporate income tax rate;
- g) eliminates virtually all corporate and business tax expenditures; and
- h) adopts a territorial system (with provisions to prevent income shifting) for the corporate income tax.

TPC then calculated individual and corporate income tax rates so that the overall proposal would raise about the same amount of revenue as under current law in the long run (defined again as FY 2037).

TPC further modified the proposal by adding a fourth individual rate<sup>2</sup> and adjusting individual rates and brackets to maintain, as closely as possible, the distribution of federal tax burdens under current law while achieving long-run revenue neutrality. Distributional neutrality is measured by the percentage changes in after-tax income across expanded cash income percentiles. The goal was to minimize those percentage changes while achieving rough revenue neutrality in FY 2037.

### ***Revenue Effects***

Revenue estimates are shown in table 1 for the analysis using individual income tax rates of 0 percent, 5 percent, 16 percent, and 29.9 percent. This rate structure results in a very small revenue gain from individual income taxes in FY 2037, offset partially by a small revenue loss from the corporate income tax provisions (with a 26 percent corporate rate).

TABLE 1

## Estimated Effect on Revenue of Distribution and Revenue Neutral Proposal

\$ billions, FY2018-2027 and FY2028-2037



Provision	Fiscal Years 2018-2027										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2018-27
<b>Individual income tax</b>											
Repeal the individual AMT, NIIT, PEP, and "Pease"	-49.7	-69.3	-82.1	-89.7	-95.0	-100.3	-106.4	-113.2	-120.1	-127.0	-952.9
Reduce individual rates to 0, 5, 16, and 29.9 percent	-508.6	-698.1	-725.4	-756.0	-788.3	-822.4	-858.0	-894.8	-932.8	-971.3	-7,955.7
Repeal individual tax expenditures (except the CTC, EITC, and partial exclusion of SSB)	473.5	699.2	751.5	797.7	839.6	884.7	931.9	980.8	1,032.1	1,083.5	8,474.4
<b>Total for individual income tax revenues</b>	<b>-84.9</b>	<b>-68.2</b>	<b>-56.1</b>	<b>-48.1</b>	<b>-43.7</b>	<b>-38.0</b>	<b>-32.4</b>	<b>-27.3</b>	<b>-20.8</b>	<b>-14.8</b>	<b>-434.2</b>
<b>Corporate income tax</b>											
Repeal the corporate AMT	-6.4	-10.6	-9.9	-8.3	-7.8	-8.0	-8.1	-8.3	-8.7	-9.0	-85.2
Reduce corporate rate to flat 26.0 percent	-48.7	-97.4	-116.6	-116.7	-118.6	-120.7	-124.3	-128.3	-132.9	-138.3	-1,142.5
Territorial system plus minimum tax on foreign-source income earned after 12-31-17	2.1	4.0	4.3	4.1	3.9	3.7	3.4	3.1	2.8	2.5	34.0
Repeal corporate tax expenditures	52.7	108.7	126.5	136.2	139.9	143.8	157.5	173.3	188.6	203.6	1,430.8
<b>Total for corporate income tax revenues</b>	<b>-0.4</b>	<b>4.7</b>	<b>4.3</b>	<b>15.3</b>	<b>17.5</b>	<b>18.8</b>	<b>28.6</b>	<b>39.8</b>	<b>49.8</b>	<b>58.8</b>	<b>237.1</b>
<b>Total revenue effect of all provisions</b>											
<b>Total revenue change</b>	<b>-85.3</b>	<b>-63.5</b>	<b>-51.8</b>	<b>-32.8</b>	<b>-26.3</b>	<b>-19.2</b>	<b>-3.8</b>	<b>12.5</b>	<b>29.0</b>	<b>44.0</b>	<b>-197.1</b>
<b>Fiscal Years 2028-2037</b>											
Provision	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2028-37
	<b>Individual income tax</b>										
Repeal the individual AMT, NIIT, PEP, and "Pease"	-134.2	-142.9	-152.5	-160.6	-168.4	-176.5	-185.1	-194.0	-203.4	-213.2	-1,730.8
Reduce individual rates to 0, 5, 16, and 29.9 percent	-1,011.9	-1,055.3	-1,100.8	-1,146.7	-1,194.0	-1,243.2	-1,294.5	-1,347.8	-1,403.4	-1,461.3	-12,259.0
Repeal individual tax expenditures (except the CTC, EITC, and partial exclusion of SSB)	1,136.8	1,192.0	1,249.7	1,305.5	1,361.4	1,419.2	1,479.3	1,542.0	1,607.6	1,675.9	13,969.5
<b>Total for individual income tax revenues</b>	<b>-9.3</b>	<b>-6.1</b>	<b>-3.7</b>	<b>-1.8</b>	<b>-1.0</b>	<b>-0.5</b>	<b>-0.2</b>	<b>0.1</b>	<b>0.8</b>	<b>1.5</b>	<b>-20.3</b>
<b>Corporate income tax</b>											
Repeal the corporate AMT	-9.4	-9.7	-10.1	-10.5	-11.0	-11.4	-11.9	-12.3	-12.8	-13.3	-112.5
Reduce corporate rate to flat 26.0 percent	-143.8	-149.6	-155.6	-161.8	-168.3	-175.0	-182.0	-189.3	-196.8	-204.7	-1,726.9
Territorial system plus minimum tax on foreign-source income earned after 12-31-17	2.1	1.7	1.3	0.9	0.4	-0.1	-0.7	-1.2	-1.9	-2.5	0.0
Repeal corporate tax expenditures	213.5	216.9	216.4	214.5	212.2	210.1	209.3	210.7	214.5	219.8	2,138.1
<b>Total for corporate income tax revenues</b>	<b>62.4</b>	<b>59.3</b>	<b>52.0</b>	<b>43.0</b>	<b>33.4</b>	<b>23.6</b>	<b>14.8</b>	<b>7.9</b>	<b>3.0</b>	<b>-0.8</b>	<b>298.7</b>
<b>Total revenue effect of all provisions</b>											
<b>Total revenue change</b>	<b>53.2</b>	<b>53.2</b>	<b>48.3</b>	<b>41.2</b>	<b>32.4</b>	<b>23.1</b>	<b>14.6</b>	<b>8.0</b>	<b>3.8</b>	<b>0.7</b>	<b>278.4</b>

Sources: Urban-Brookings Tax Policy Center (TPC) Microsimulation Model (version 0217-1) and TPC off-model estimates.

Notes: AMT = alternative minimum tax; CTC = child tax credit; EITC = earned income tax credit; NIIT = net investment income tax; PEP = personal exemption phaseout; "Pease" = limitation on itemized deductions; SSB = Social Security benefits.

## Distributional Effects

The percentage change in after-tax income is 1 percent or less in all income percentiles (table 2) with these revenue-neutral rates, roughly maintaining the distribution of tax burdens under current law. The largest change is for households in the top 1 percent of the income distribution; after-tax income for these households would increase by 1 percent on average (for the top 0.1 percent, the increase would be only 0.1 percent). The lowest quintile of the income distribution would have the largest projected reduction in after-tax income, but that would be only -0.2 percent.

**TABLE 2**

### Distribution of Federal Tax Change, Distribution and Revenue Neutral Proposal

By expanded cash income percentile, 2027<sup>a</sup>



Expanded cash income percentile <sup>b,c</sup>	Percent change in after-tax income (%) <sup>d</sup>	Share of total federal tax change (%)	Average federal tax change (\$)	Average Federal Tax Rate <sup>e</sup>	
				Change (% points)	Under the proposal (%)
Lowest quintile	-0.2	-2.7	40	0.2	4.5
Second quintile	0.4	10.5	-180	-0.4	8.5
Middle quintile	0.6	23.5	-470	-0.5	13.3
Fourth quintile	0.4	19.0	-460	-0.3	16.6
Top quintile	0.4	50.1	-1,420	-0.3	26.0
All	0.4	100.0	-390	-0.3	19.9
<b>Addendum</b>					
80–90	-0.1	-3.4	190	0.1	19.9
90–95	0.2	4.7	-550	-0.2	21.7
95–99	0.4	10.7	-1,590	-0.3	25.3
Top 1 percent	1.0	38.1	-22,940	-0.6	32.8
Top 0.1 percent	0.1	1.9	-11,350	-0.1	33.8

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

**Note:** Number of AMT taxpayers (millions): Baseline: 5.6; Proposal: 0.

<sup>a</sup> Calendar year. Baseline is current law. Proposal would: repeal the Net Investment Income Tax (NIIT), individual and corporate alternative minimum tax (AMT), phase-out of personal exemptions, and Pease limitation on itemized deductions; set individual tax rates of 0 percent, 5 percent, 16 percent, and 29.9 percent; repeal individual income tax expenditures except the CTC, EITC, and partial exclusion of Social Security benefits; set corporate tax rate of 26 percent; implement territorial system plus minimum tax on foreign-source income; and repeal corporate tax expenditures.  
<http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm>

<sup>b</sup> Includes both filing and non-filing units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>

<sup>c</sup> The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks are (in 2017 dollars): 20% \$28,100; 40% \$54,700; 60% \$93,200; 80% \$154,900; 90% \$225,400; 95% \$304,600; 99% \$912,100; 99.9% \$5,088,900.

<sup>d</sup> After-tax income is expanded cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); estate tax; and excise taxes.

<sup>e</sup> Average federal tax (includes individual and corporate income tax, payroll taxes for Social Security and Medicare, the estate tax, and excise taxes) as a percentage of average expanded cash income.

## *Implications*

Together, a corporate tax rate of 26 percent and individual income tax rates of 0 percent, 5 percent, 16 percent, and 29.9 percent simultaneously achieve near distributional neutrality and long-run revenue neutrality. This provides a reasonable baseline for adding tax expenditures back to the system, either separately or in groups.

## **RESTORE SELECTED GROUPS OF TAX EXPENDITURES**

After creating a nearly tax expenditure-free baseline, TPC restored four groups of individual tax expenditures to the revenue- and distributional-neutral baseline:

- tax expenditures for retirement
- tax expenditures for health
- the itemized deduction for state and local taxes
- the itemized deduction for mortgage interest

TPC also restored the corporate tax expenditures for research and experimentation.<sup>3</sup>

To achieve revenue neutrality in FY 2037 when restoring each of the four groups of individual tax expenditures, the three non-zero individual income tax rates were adjusted upward proportionately. The lowest of the four rates is 0, so a different approach was required to adjust that rate upward as each group of tax expenditures was restored. Our approach was to multiply the proportional change in the top three rates by 15 percent (the second lowest rate under current law) to determine the lowest rate.<sup>4</sup> This permits the lowest income tax rate to move up roughly in line with the other tax rates. In this exercise, the corporate tax rate was simply adjusted upward to achieve revenue neutrality in FY 2037, when the corporate tax expenditures for research and experimentation are added back to the starting baseline.

## *Revenue Effects*

Revenue estimates for the restoration of all five groups of tax expenditures combined with the proportionately higher rates over the FY 2018–27 period are shown in table 3A and for the FY 2028–37 period in table 3B. Compared with current law, all five scenarios lose revenue over the FY 2018–27 period, raise revenue over the FY 2028–37 period, and have (modest) overall revenue gains over the FY 2018–37 period.

Table 3A also shows the individual income tax rates required for each hypothetical tax system to achieve long-run (FY 2037) revenue neutrality when compared with current law. For individual tax expenditures, the largest rate adjustments were needed when tax expenditures for retirement and health were added back.

TABLE 3A

## Estimated Effect on Revenues of Restoring Selected Groups of Tax Expenditures

\$ billions, FY2018-2027



Provision	Fiscal Years 2018-2027										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2018-27
<b>Group 1: Tax Expenditures for Retirement</b>											
Reduce individual rates to 1.3, 5.5, 17.6, and 32.9 percent	-439.6	-602.7	-625.7	-651.3	-678.2	-706.5	-735.9	-766.2	-797.4	-829.0	-6,832.4
Repeal individual tax expenditures (except retirement-related and the CTC, EITC, and partial exclusion of SSB)	408.9	611.5	656.6	694.5	728.5	765.0	804.4	845.9	889.3	933.9	7,338.5
Provisions unchanged from previous proposal <sup>1</sup>	-50.2	-64.6	-77.8	-74.5	-77.5	-81.5	-77.8	-73.5	-70.3	-68.2	-715.8
<b>Total revenue change</b>	<b>-80.9</b>	<b>-55.8</b>	<b>-46.9</b>	<b>-31.2</b>	<b>-27.1</b>	<b>-23.0</b>	<b>-9.2</b>	<b>6.3</b>	<b>21.6</b>	<b>36.6</b>	<b>-209.7</b>
<b>Group 2: Tax Expenditures for Health</b>											
Reduce individual rates to 1.4, 5.5, 17.7, and 33.1 percent	-435.3	-596.7	-619.4	-644.7	-671.2	-699.2	-728.1	-758.0	-788.8	-819.9	-6,761.4
Repeal individual tax expenditures (except health-related and the CTC, EITC, and partial exclusion of SSB)	392.7	591.4	639.6	680.6	716.4	755.4	796.6	839.4	884.1	929.2	7,225.4
Provisions unchanged from previous proposal <sup>1</sup>	-50.2	-64.6	-77.8	-74.5	-77.5	-81.5	-77.8	-73.5	-70.3	-68.2	-715.8
<b>Total revenue change</b>	<b>-92.7</b>	<b>-69.8</b>	<b>-57.6</b>	<b>-38.6</b>	<b>-32.3</b>	<b>-25.4</b>	<b>-9.3</b>	<b>7.9</b>	<b>25.1</b>	<b>41.0</b>	<b>-251.8</b>
<b>Group 3: Itemized Deduction for State and Local Taxes</b>											
Reduce individual rates to 0.8, 5.3, 17, and 31.7 percent	-466.5	-639.8	-664.5	-692.1	-721.1	-751.7	-783.5	-816.5	-850.4	-884.7	-7,270.9
Repeal individual tax expenditures (except SALT and the CTC, EITC, and partial exclusion of SSB)	441.4	656.1	704.8	747.5	784.8	825.9	870.0	913.9	960.0	1,006.6	7,911.0
Provisions unchanged from previous proposal <sup>1</sup>	-50.2	-64.6	-77.8	-74.5	-77.5	-81.5	-77.8	-73.5	-70.3	-68.2	-715.8
<b>Total revenue change</b>	<b>-75.2</b>	<b>-48.3</b>	<b>-37.6</b>	<b>-19.0</b>	<b>-13.8</b>	<b>-7.3</b>	<b>8.7</b>	<b>23.9</b>	<b>39.3</b>	<b>53.6</b>	<b>-75.7</b>
<b>Group 4: Itemized Deduction for Mortgage Interest</b>											
Reduce individual rates to 0.3, 5.1, 16.4, and 30.7 percent	-491.6	-674.6	-700.9	-730.2	-761.1	-793.8	-827.8	-863.1	-899.3	-936.1	-7,678.7
Repeal individual tax expenditures (except MID and the CTC, EITC, and partial exclusion of SSB)	465.9	687.1	735.6	779.5	819.4	862.6	908.3	955.2	1,004.3	1,053.8	8,271.7
Provisions unchanged from previous proposal <sup>1</sup>	-50.2	-64.6	-77.8	-74.5	-77.5	-81.5	-77.8	-73.5	-70.3	-68.2	-715.8
<b>Total revenue change</b>	<b>-75.9</b>	<b>-52.1</b>	<b>-43.1</b>	<b>-25.2</b>	<b>-19.3</b>	<b>-12.7</b>	<b>2.7</b>	<b>18.7</b>	<b>34.7</b>	<b>49.5</b>	<b>-122.8</b>
<b>Corporate Tax Expenditures for R&amp;E<sup>2</sup></b>											
Reduce corporate rate to flat 27.1 percent	-42.8	-85.5	-102.4	-102.5	-104.1	-105.9	-109.1	-112.6	-116.7	-121.4	-1,002.9
Territorial system plus minimum tax on foreign-source income earned after 12-31-17	2.3	4.6	4.9	4.7	4.4	4.2	3.9	3.5	3.2	2.8	38.4
Repeal corporate tax expenditures (except R&E-related)	34.5	75.5	95.1	111.1	121.2	129.9	145.3	160.6	175.2	189.7	1,238.0
Provisions unchanged from previous proposal <sup>3</sup>	-91.3	-78.8	-66.0	-56.4	-51.5	-46.0	-40.5	-35.6	-29.4	-23.8	-519.3
<b>Total revenue change</b>	<b>-97.2</b>	<b>-84.3</b>	<b>-68.3</b>	<b>-43.1</b>	<b>-30.0</b>	<b>-17.9</b>	<b>-0.5</b>	<b>16.0</b>	<b>32.2</b>	<b>47.3</b>	<b>-245.8</b>

**Sources:** Urban-Brookings Tax Policy Center (TPC) Microsimulation Model (version 0217-1) and TPC off-model estimates.

**Notes:** AMT = alternative minimum tax; CTC = child tax credit; EITC = earned income tax credit; MID = itemized deduction for mortgage interest; NIIT = net investment income tax; PEP = personal exemption phaseout; "Pease" = limitation on itemized deductions; R&E = research and experimentation; SALT = itemized deduction for state and local taxes; SSB = Social Security benefits.

<sup>1</sup> Includes the revenue effect of the repeal of the individual AMT, NIIT, PEP, and "Pease" and all corporate income tax provisions shown in Table 1.

<sup>2</sup> Includes the research and experimentation credit and expensing of research and development costs.

<sup>3</sup> Includes the revenue effect of the repeal of the corporate AMT and all individual income tax provisions shown in Table 1.

TABLE 3B

## Estimated Effect on Revenues of Restoring Selected Groups of Tax Expenditures

\$ billions, FY2028-2037



Provision	Fiscal Years 2018-2027										
	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2028-37
<b>Group 1: Tax Expenditures for Retirement</b>											
Reduce individual rates to 1.3, 5.5, 17.6, and 32.9 percent	-862.3	-897.8	-935.0	-973.4	-1,013.2	-1,054.7	-1,097.8	-1,142.8	-1,189.5	-1,238.2	-10,404.5
Repeal individual tax expenditures (except retirement-related and the CTC, EITC, and partial exclusion of SSB)	979.3	1,027.1	1,078.3	1,126.2	1,173.4	1,223.0	1,275.2	1,330.3	1,388.4	1,449.5	12,050.6
Provisions unchanged from previous proposal <sup>1</sup>	-71.7	-83.5	-100.5	-117.6	-135.0	-152.9	-170.2	-186.1	-200.4	-214.0	-1,432.1
<b>Total revenue change</b>	<b>45.3</b>	<b>45.8</b>	<b>42.8</b>	<b>35.2</b>	<b>25.2</b>	<b>15.4</b>	<b>7.1</b>	<b>1.4</b>	<b>-1.5</b>	<b>-2.7</b>	<b>214.0</b>
<b>Group 2: Tax Expenditures for Health</b>											
Reduce individual rates to 1.4, 5.5, 17.7, and 33.1 percent	-852.7	-887.6	-924.3	-962.2	-1,001.5	-1,042.5	-1,085.1	-1,129.5	-1,175.7	-1,223.8	-10,284.9
Repeal individual tax expenditures (except health-related and the CTC, EITC, and partial exclusion of SSB)	975.6	1,023.6	1,074.3	1,122.2	1,169.2	1,217.8	1,268.2	1,320.6	1,375.6	1,432.8	11,979.9
Provisions unchanged from previous proposal <sup>1</sup>	-71.7	-83.5	-100.5	-117.6	-135.0	-152.9	-170.2	-186.1	-200.4	-214.0	-1,432.1
<b>Total revenue change</b>	<b>51.2</b>	<b>52.4</b>	<b>49.5</b>	<b>42.5</b>	<b>32.7</b>	<b>22.4</b>	<b>12.8</b>	<b>4.9</b>	<b>-0.5</b>	<b>-5.0</b>	<b>262.9</b>
<b>Group 3: Itemized Deduction for State and Local Taxes</b>											
Reduce individual rates to 0.8, 5.3, 17, and 31.7 percent	-920.9	-959.6	-1,000.1	-1,041.4	-1,084.2	-1,128.7	-1,175.0	-1,223.2	-1,273.4	-1,325.7	-11,132.1
Repeal individual tax expenditures (except SALT and the CTC, EITC, and partial exclusion of SSB)	1,054.3	1,103.2	1,154.2	1,204.9	1,255.7	1,308.3	1,362.9	1,419.7	1,479.2	1,541.1	12,883.6
Provisions unchanged from previous proposal <sup>1</sup>	-71.7	-83.5	-100.5	-117.6	-135.0	-152.9	-170.2	-186.1	-200.4	-214.0	-1,432.1
<b>Total revenue change</b>	<b>61.7</b>	<b>60.2</b>	<b>53.6</b>	<b>45.9</b>	<b>36.6</b>	<b>26.8</b>	<b>17.6</b>	<b>10.3</b>	<b>5.4</b>	<b>1.5</b>	<b>319.5</b>
<b>Group 4: Itemized Deduction for Mortgage Interest</b>											
Reduce individual rates to 0.3, 5.1, 16.4, and 30.7 percent	-974.9	-1,016.3	-1,059.7	-1,103.7	-1,149.1	-1,196.4	-1,245.7	-1,296.9	-1,350.3	-1,405.9	-11,798.8
Repeal individual tax expenditures (except MID and the CTC, EITC, and partial exclusion of SSB)	1,104.6	1,158.7	1,215.6	1,269.3	1,322.4	1,377.4	1,434.5	1,493.9	1,556.1	1,620.8	13,553.3
Provisions unchanged from previous proposal <sup>1</sup>	-71.7	-83.5	-100.5	-117.6	-135.0	-152.9	-170.2	-186.1	-200.4	-214.0	-1,432.1
<b>Total revenue change</b>	<b>58.0</b>	<b>58.9</b>	<b>55.4</b>	<b>48.0</b>	<b>38.3</b>	<b>28.1</b>	<b>18.6</b>	<b>10.8</b>	<b>5.4</b>	<b>0.9</b>	<b>322.5</b>
<b>Corporate Tax Expenditures for R&amp;E<sup>2</sup></b>											
Reduce corporate rate to flat 27.1 percent	-126.2	-131.3	-136.6	-142.0	-147.7	-153.6	-159.8	-166.1	-172.8	-179.7	-1,515.8
Territorial system plus minimum tax on foreign-source income earned after 12-31-17	2.4	1.9	1.5	1.0	0.4	-0.1	-0.8	-1.4	-2.1	-2.8	0.0
Repeal corporate tax expenditures (except R&E-related)	199.1	201.6	200.1	197.0	193.6	190.3	188.2	188.5	191.1	195.3	1,944.7
Provisions unchanged from previous proposal <sup>3</sup>	-18.7	-15.9	-13.8	-12.4	-12.0	-11.9	-12.0	-12.2	-12.0	-11.9	-132.8
<b>Total revenue change</b>	<b>56.5</b>	<b>56.4</b>	<b>51.1</b>	<b>43.6</b>	<b>34.3</b>	<b>24.6</b>	<b>15.7</b>	<b>8.7</b>	<b>4.2</b>	<b>0.9</b>	<b>296.1</b>

**Sources:** Urban-Brookings Tax Policy Center (TPC) Microsimulation Model (version 0217-1) and TPC off-model estimates.

**Notes:** AMT = alternative minimum tax; CTC = child tax credit; EITC = earned income tax credit; MID = itemized deduction for mortgage interest; NIIT = net investment income tax; PEP = personal exemption phaseout; "Pease" = limitation on itemized deductions; R&E = research and experimentation; SALT = itemized deduction for state and local taxes; SSB = Social Security benefits.

<sup>1</sup> Includes the revenue effect of the repeal of the individual AMT, NIIT, PEP, and "Pease" and all corporate income tax provisions shown in Table 1.

<sup>2</sup> Includes the research and experimentation credit and expensing of research and development costs.

<sup>3</sup> Includes the revenue effect of the repeal of the corporate AMT and all individual income tax provisions shown in Table 1.



## *Interaction Effects*

In the previous step, each of the four groups of individual tax expenditures was restored separately and revenue-neutral tax rates computed. But the combined effect of these steps on individual income tax rates would be expected to be different if two or more groups were simultaneously restored.<sup>5</sup> These differences are because of “interaction effects,” the way that some provisions of the tax code affect the way other provisions operate. The restoration of itemized deductions provides a good example of such interaction effects. Because most itemized deductions had been repealed under the original exercise, nearly all taxpayers would use the standard deduction.<sup>6</sup> The amount of state and local taxes paid by most taxpayers is less than their standard deduction, so restoring just the deduction for state and local taxes would cause relatively few taxpayers to switch from claiming the standard deduction to itemization. Likewise, mortgage interest payments for most taxpayers are less than their standard deduction, so restoring just that deduction would not result in many itemizers. But the sum of state and local taxes and mortgage interest paid is larger than the standard deduction for many taxpayers for whom neither deduction alone exceeds the standard deduction amount, so restoring both deductions simultaneously would result in substantially more itemizers.

TPC produced an additional set of estimates to help quantify the importance of interaction effects.<sup>7</sup> These estimates restored the itemized deductions for state and local taxes and mortgage interest simultaneously. We first calculated the change in individual income tax rates from this set of estimates, compared with the revenue- and distributionally neutral rates. Then we calculated the change in rates from the estimates for each of the two separate restorations of these groups from the revenue- and distributionally neutral rates. And then we added up those changes. The interaction effect is the difference between the changes from the simultaneous repeal set of estimates and the combined changes from the separate repeal sets of estimates. The results of these calculations (table 4) show fairly significant interaction effects between these two deductions. The interactions indicate that we must consider the potential relationship between tax expenditures in a tax reform effort, and not consider them in isolation. Ignoring interaction effects means the revenue consequences of the reform effort would be misestimated.

TABLE 4

## Interaction Effects on Individual Income Tax Rates of Restoring Itemized Deductions for State and Local Taxes and Mortgage Interest



Task and Groupings of Tax Expenditures	Individual Income Tax Rate Bracket			
	First	Second	Third	Fourth
Rates from previous proposal (Table 1)	0.0	5.0	16.0	29.9
<b>Rates with Groups of Tax Expenditures Restored</b>				
Both itemized deductions simultaneously restored	1.5	5.5	17.7	33.2
Each itemized deduction restored:				
Group 3 (state and local tax deduction)	0.8	5.3	17.0	31.7
Group 4 (mortgage interest deduction)	0.3	5.1	16.4	30.7
<b>Change in Rates from Restoring Groups of Tax Expenditures</b>				
Both itemized deductions simultaneously restored	1.5	0.5	1.7	3.3
Each itemized deduction restored:				
Group 3 (state and local tax deduction)	0.8	0.3	1.0	1.8
Group 4 (mortgage interest deduction)	0.3	0.1	0.4	0.8
Total	1.1	0.4	1.4	2.6
<b>Interaction Effect</b>				
<b>Interaction effect on rates<sup>1</sup></b>	<b>0.4</b>	<b>0.1</b>	<b>0.3</b>	<b>0.7</b>

<sup>1</sup> The interaction effect is the difference between the effect of simultaneously restoring both itemized deductions and the combined effect of separately restoring each of the two itemized deductions.

### *Distributional Effects*

Distributional effects by expanded cash income percentile are shown for the restoration of

- retirement-related individual tax expenditures in table 5;
- health-related individual tax expenditures in table 6;
- itemized deduction for state and local taxes in table 7;
- itemized deduction for mortgage interest in table 8; and
- corporate tax expenditures for research and experimentation in table 9.

For the four groups of individual income tax expenditures, the tax rates for the distributionally neutral scenario were proportionately adjusted when the tax expenditures were restored. However, the tax expenditures being analyzed are not uniformly distributed across income groups, so the changes shown in tables 5 through 8 are no longer distributionally neutral. Similarly, the (single) corporate tax rate was adjusted when the research and experimentation tax expenditures were restored, but these changes in the corporate tax base are not distributed in the same manner as the increase in the corporate tax rate used to finance them, so the tax changes in table 9 are also no longer distributionally neutral.<sup>8</sup>

These differential distributional results are summarized by cash income percentile in table 10, which shows the difference between the effects of restoration of each group on after-tax income (relative to current law) and the effects of the distributionally neutral exercise on after-

tax income (relative to current law). Restoration of retirement-related expenditures, health-related expenditures, itemized deduction for mortgage interest, and corporate research and experimentation expenditures—with income tax rates proportionately adjusted to maintain revenue neutrality—would all shift tax burdens to high-income tax units (i.e., the after-tax incomes of higher-income households would decline).<sup>9</sup> This effect is most pronounced for the tax expenditures for retirement and health, with people in the top 1 percent of the income distribution seeing relatively large increases in tax burden. This is because of the substantial upward shift in the top individual income tax rate necessary to offset the revenue loss (3 percentage points or more). This increased tax rate, though, applies to nearly all income for the household, while the restored tax expenditure is small relative to the size of household income. Conversely, restoration of the deduction for state and local taxes would shift tax burdens from high-income tax units to low- and middle-income units.

TABLE 5

## Distribution of Federal Tax Change, Restoration of Tax Expenditures for Retirement

By expanded cash income percentile, 2027<sup>a</sup>



Expanded cash income percentile <sup>b,c</sup>	Percent change in after-tax income (%) <sup>d</sup>	Share of total federal tax change (%)	Average federal tax change (\$)	Average Federal Tax Rate <sup>e</sup>	
				Change (% points)	Under the proposal (%)
Lowest quintile	-0.2	-4.0	50	0.2	4.5
Second quintile	0.5	15.6	-210	-0.4	8.4
Middle quintile	1.0	47.6	-740	-0.8	13.0
Fourth quintile	1.0	66.1	-1,260	-0.8	16.1
Top quintile	-0.2	-24.7	550	0.1	26.4
All	0.3	100.0	-310	-0.3	19.9
<b>Addendum</b>					
80–90	0.7	29.7	-1,280	-0.6	19.2
90–95	1.4	38.5	-3,530	-1.1	20.8
95–99	0.8	30.2	-3,530	-0.6	24.9
Top 1 percent	-2.5	-123.2	58,430	1.6	35.1
Top 0.1 percent	-4.0	-89.0	419,450	2.6	36.5

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

**Note:** Number of AMT taxpayers (millions): Baseline: 5.6; Proposal: 0.

<sup>a</sup> Calendar year. Baseline is current law. Proposal would: repeal the Net Investment Income Tax (NIIT), individual and corporate alternative minimum tax (AMT), phase-out of personal exemptions, and Pease limitation on itemized deductions; set individual tax rates of 1.3 percent, 5.5 percent, 17.6 percent, and 32.9 percent; repeal individual income tax expenditures except those that are retirement-related and the CTC, EITC, and partial exclusion of Social Security benefits; set corporate tax rate of 26 percent; implement territorial system plus minimum tax on foreign-source income; and repeal corporate tax expenditures. <http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm>

<sup>b</sup> Includes both filing and non-filing units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>

<sup>c</sup> The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks are (in 2017 dollars): 20% \$28,100; 40% \$54,700; 60% \$93,200; 80% \$154,900; 90% \$225,400; 95% \$304,600; 99% \$912,100; 99.9% \$5,088,900.

<sup>d</sup> After-tax income is expanded cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); estate tax; and excise taxes.

<sup>e</sup> Average federal tax (includes individual and corporate income tax, payroll taxes for Social Security and Medicare, the estate tax, and excise taxes) as a percentage of average expanded cash income.

TABLE 6

## Distribution of Federal Tax Change, Restoration of Tax Expenditures for Health

By expanded cash income percentile, 2027<sup>a</sup>



Expanded cash income percentile <sup>b,c</sup>	Percent change in after-tax income (%) <sup>d</sup>	Share of total federal tax change (%)	Average federal tax change (\$)	Average Federal Tax Rate <sup>e</sup>	
				Change (% points)	Under the proposal (%)
Lowest quintile	-0.3	-5.5	60	0.3	4.6
Second quintile	0.8	30.6	-390	-0.8	8.1
Middle quintile	1.4	75.6	-1,100	-1.2	12.6
Fourth quintile	1.5	104.1	-1,850	-1.2	15.7
Top quintile	-0.6	-104.1	2,170	0.5	26.7
All	0.3	100.0	-290	-0.2	19.9
<b>Addendum</b>					
80–90	0.6	29.7	-1,190	-0.5	19.3
90–95	0.4	12.4	-1,060	-0.3	21.6
95–99	-0.1	-4.8	520	0.1	25.7
Top 1 percent	-2.6	-141.4	62,470	1.8	35.2
Top 0.1 percent	-4.0	-96.8	424,820	2.7	36.5

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

**Note:** Number of AMT taxpayers (millions): Baseline: 5.6; Proposal: 0.

<sup>a</sup> Calendar year. Baseline is current law. Proposal would: repeal the Net Investment Income Tax (NIIT), individual and corporate alternative minimum tax (AMT), phase-out of personal exemptions, and Pease limitation on itemized deductions; set individual tax rates of 1.4 percent, 5.5 percent, 17.7 percent, and 33.1 percent; repeal individual income tax expenditures except those that are health-related and the CTC, EITC, and partial exclusion of Social Security benefits; set corporate tax rate of 26 percent; implement territorial system plus minimum tax on foreign-source income; and repeal corporate tax expenditures. <http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm>

<sup>b</sup> Includes both filing and non-filing units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>

<sup>c</sup> The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks are (in 2017 dollars): 20% \$28,100; 40% \$54,700; 60% \$93,200; 80% \$154,900; 90% \$225,400; 95% \$304,600; 99% \$912,100; 99.9% \$5,088,900.

<sup>d</sup> After-tax income is expanded cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); estate tax; and excise taxes.

<sup>e</sup> Average federal tax (includes individual and corporate income tax, payroll taxes for Social Security and Medicare, the estate tax, and excise taxes) as a percentage of average expanded cash income.

TABLE 7

## Distribution of Federal Tax Change, Restoration of Itemized Deduction for State and Local Taxes By expanded cash income percentile, 2027<sup>a</sup>



Expanded cash income percentile <sup>b,c</sup>	Percent change in after-tax income (%) <sup>d</sup>	Share of total federal tax change (%)	Average federal tax change (\$)	Average Federal Tax Rate <sup>e</sup>	
				Change (% points)	Under the proposal (%)
Lowest quintile	-0.3	-7.1	60	0.3	4.6
Second quintile	0.2	7.7	-80	-0.2	8.7
Middle quintile	0.3	17.1	-200	-0.2	13.6
Fourth quintile	0.0	0.6	-10	0.0	17.0
Top quintile	0.4	82.4	-1,390	-0.3	26.0
All	0.2	100.0	-230	-0.2	20.0
<b>Addendum</b>					
80–90	-0.5	-28.0	910	0.4	20.2
90–95	-0.1	-5.0	340	0.1	22.0
95–99	0.7	32.4	-2,850	-0.5	25.1
Top 1 percent	1.3	83.0	-29,650	-0.8	32.6
Top 0.1 percent	0.4	12.5	-44,360	-0.3	33.6

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

**Note:** Number of AMT taxpayers (millions): Baseline: 5.6; Proposal: 0.

<sup>a</sup> Calendar year. Baseline is current law. Proposal would: repeal the Net Investment Income Tax (NIIT), individual and corporate alternative minimum tax (AMT), phase-out of personal exemptions, and Pease limitation on itemized deductions; set individual tax rates of 0.8 percent, 5.3 percent, 17.0 percent, and 31.7 percent; repeal individual income tax expenditures except the itemized deduction for state and local taxes and the CTC, EITC, and partial exclusion of Social Security benefits; set corporate tax rate of 26 percent; implement territorial system plus minimum tax on foreign-source income; and repeal corporate tax expenditures. <http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm>

<sup>b</sup> Includes both filing and non-filing units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>

<sup>c</sup> The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks are (in 2017 dollars): 20% \$28,100; 40% \$54,700; 60% \$93,200; 80% \$154,900; 90% \$225,400; 95% \$304,600; 99% \$912,100; 99.9% \$5,088,900.

<sup>d</sup> After-tax income is expanded cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); estate tax; and excise taxes.

<sup>e</sup> Average federal tax (includes individual and corporate income tax, payroll taxes for Social Security and Medicare, the estate tax, and excise taxes) as a percentage of average expanded cash income.

TABLE 8

## Distribution of Federal Tax Change, Restoration of Itemized Deduction for Mortgage Interest By expanded cash income percentile, 2027<sup>a</sup>



Expanded cash income percentile <sup>b,c</sup>	Percent change in after-tax income (%) <sup>d</sup>	Share of total federal tax change (%)	Average federal tax change (\$)	Average Federal Tax Rate <sup>e</sup>	
				Change (% points)	Under the proposal (%)
Lowest quintile	-0.2	-3.7	50	0.2	4.5
Second quintile	0.4	10.8	-160	-0.3	8.5
Middle quintile	0.6	27.3	-460	-0.5	13.3
Fourth quintile	0.4	26.0	-540	-0.4	16.6
Top quintile	0.3	40.0	-970	-0.2	26.1
All	0.3	100.0	-340	-0.3	19.9
<b>Addendum</b>					
80–90	0.0	1.6	-80	0.0	19.8
90–95	0.3	8.8	-880	-0.3	21.6
95–99	0.7	24.0	-3,040	-0.5	25.0
Top 1 percent	0.1	5.6	-2,890	-0.1	33.4
Top 0.1 percent	-1.0	-20.3	103,540	0.7	34.5

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

**Note:** Number of AMT taxpayers (millions): Baseline: 5.6; Proposal: 0.

<sup>a</sup> Calendar year. Baseline is current law. Proposal would: repeal the Net Investment Income Tax (NIIT), individual and corporate alternative minimum tax (AMT), phase-out of personal exemptions, and Pease limitation on itemized deductions; set individual tax rates of 0.3 percent, 5.1 percent, 16.4 percent, and 30.7 percent; repeal individual income tax expenditures except the itemized deduction for mortgage interest and the CTC, EITC, and partial exclusion of Social Security benefits; set corporate tax rate of 26 percent; implement territorial system plus minimum tax on foreign-source income; and repeal corporate tax expenditures. <http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm>

<sup>b</sup> Includes both filing and non-filing units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>

<sup>c</sup> The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks are (in 2017 dollars): 20% \$28,100; 40% \$54,700; 60% \$93,200; 80% \$154,900; 90% \$225,400; 95% \$304,600; 99% \$912,100; 99.9% \$5,088,900.

<sup>d</sup> After-tax income is expanded cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); estate tax; and excise taxes.

<sup>e</sup> Average federal tax (includes individual and corporate income tax, payroll taxes for Social Security and Medicare, the estate tax, and excise taxes) as a percentage of average expanded cash income.

TABLE 9

## Distribution of Federal Tax Change, Restoration of Corporate Tax Expenditures for R&E By expanded cash income percentile, 2027<sup>a</sup>



Expanded cash income percentile <sup>b,c</sup>	Percent change in after-tax income (%) <sup>d</sup>	Share of total federal tax change (%)	Average federal tax change (\$)	Average Federal Tax Rate <sup>e</sup>	
				Change (% points)	Under the proposal (%)
Lowest quintile	-0.2	-2.2	30	0.1	4.5
Second quintile	0.4	12.4	-200	-0.4	8.5
Middle quintile	0.6	27.1	-490	-0.5	13.3
Fourth quintile	0.4	22.4	-490	-0.3	16.6
Top quintile	0.3	40.8	-1,050	-0.2	26.0
All	0.4	100.0	-360	-0.3	19.9
<b>Addendum</b>					
80–90	-0.1	-3.4	170	0.1	19.9
90–95	0.2	5.1	-540	-0.2	21.7
95–99	0.3	9.5	-1,280	-0.2	25.3
Top 1 percent	0.7	29.7	-16,250	-0.5	33.0
Top 0.1 percent	-0.4	-6.9	37,700	0.2	34.1

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

**Note:** Number of AMT taxpayers (millions): Baseline: 5.6; Proposal: 0.

<sup>a</sup> Calendar year. Baseline is current law. Proposal would: repeal the Net Investment Income Tax (NIIT), individual and corporate alternative minimum tax (AMT), phase-out of personal exemptions, and Pease limitation on itemized deductions; set individual tax rates of 0 percent, 5 percent, 16 percent, and 29.9 percent; repeal individual income tax expenditures except the CTC, EITC, and partial exclusion of Social Security benefits; set corporate tax rate of 27.1 percent; implement territorial system plus minimum tax on foreign-source income; and repeal corporate tax expenditures except those related to research and experimentation. <http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm>

<sup>b</sup> Includes both filing and non-filing units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>

<sup>c</sup> The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks are (in 2017 dollars): 20% \$28,100; 40% \$54,700; 60% \$93,200; 80% \$154,900; 90% \$225,400; 95% \$304,600; 99% \$912,100; 99.9% \$5,088,900.

<sup>d</sup> After-tax income is expanded cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); estate tax; and excise taxes.

<sup>e</sup> Average federal tax (includes individual and corporate income tax, payroll taxes for Social Security and Medicare, the estate tax, and excise taxes) as a percentage of average expanded cash income.



TABLE 10

## Difference in the Percentage Change in After-Tax Income from Restoring Each Group of Tax Expenditures

By expanded cash income percentile, 2027<sup>a</sup>



Expanded cash income percentile <sup>b,c</sup>	Difference in percent change in after-tax income (% points) <sup>d</sup>				
	Group 1 (Retirement-related)	Group 2 (Health-related)	Group 3 (Deduction for state and local taxes)	Group 4 (Deduction for mortgage interest)	Group 5 (Corporate R&E-related)
Lowest quintile	0.0	-0.1	-0.1	0.0	0.0
Second quintile	0.1	0.4	-0.2	0.0	0.0
Middle quintile	0.4	0.8	-0.3	0.0	0.0
Fourth quintile	0.6	1.1	-0.4	0.0	0.0
Top quintile	-0.6	-1.0	0.0	-0.1	-0.1
All	-0.1	-0.1	-0.2	-0.1	0.0
<b>Addendum</b>					
80–90	0.8	0.7	-0.4	0.1	0.0
90–95	1.2	0.2	-0.3	0.1	0.0
95–99	0.4	-0.5	0.3	0.3	-0.1
Top 1 percent	-3.5	-3.6	0.3	-0.9	-0.3
Top 0.1 percent	-4.1	-4.1	0.3	-1.1	-0.5

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0217-1).

<sup>a</sup> Calendar year. Baseline is current law. <http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm>

<sup>b</sup> Includes both filing and non-filing units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>

<sup>c</sup> The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks are (in 2017 dollars): 20% \$28,100; 40% \$54,700; 60% \$93,200; 80% \$154,900; 90% \$225,400; 95% \$304,600; 99% \$912,100; 99.9% \$5,088,900.

<sup>d</sup> After-tax income is expanded cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); estate tax; and excise taxes.

## CONCLUSION

This series of exercises shows that a reform of the US income tax system that repeals virtually all tax expenditures is technically achievable in a way that maintains both the revenue levels and the distributional consequences associated with the current tax system. Maintaining approximate long-run revenue neutrality for the corporate income tax with all tax expenditures repealed would require a statutory income tax rate of around 26 percent. Maintaining approximate distributional neutrality as well as overall long-run revenue neutrality for the individual income tax with nearly all tax expenditures repealed would require a 0 percent income tax bracket for many low-income households and a top rate of almost 30 percent for high-income households.

When adding various groups of tax expenditures back individually, the general result is an increase in individual income tax rates to maintain long-run revenue neutrality. However, because these rate increases are done (more or less) proportionately, the distributional consequences shift some of the overall burden among income categories. The shift is most pronounced for retirement and health tax expenditures, with higher tax burdens for households in the top 1 percent of the income distribution.

When adding back the tax expenditures for research, the revenue-neutral corporate income tax rate is increased by just over 1 percentage point, from 26 percent to 27.1 percent.

## NOTES

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<sup>1</sup> For the three-rate system, the current 10 and 15 percent brackets of current law were combined, the 25 and 28 percent brackets combined, and the 33 percent and higher brackets combined.

<sup>2</sup> For the four-bracket system, the current 10 percent and 15 percent brackets were retained, the 25 percent and 28 percent brackets were retained but with the end of the 28 percent bracket increased by 28 percent, and the fourth bracket covered all remaining higher brackets.

<sup>3</sup> Appendix A lists the specific tax expenditures included in each group.

<sup>4</sup> We chose 15 percent (rather than the 10 percentage point differential between the lowest rates under current law and the first proposal) to roughly reflect the average proportion of the gap between the rates computed to be distributionally neutral and the rates under current law.

<sup>5</sup> Because rates are adjusted to achieve revenue neutrality (as closely as possible) in FY 2037 when each group of tax expenditures is restored, revenue patterns over time do not isolate interaction effects.

<sup>6</sup> Itemized deductions claimed for costs of earning income, such as the deduction for investment interest, are not tax expenditures and so remained available to taxpayers in the original exercise.

<sup>7</sup> As another part of the exercise, TPC also restored all four groups of individual tax expenditures simultaneously and adjusted individual income tax rates to achieve revenue neutrality in FY 2037. These calculations show fairly significant interaction effects that would require higher tax rates than if the groups were restored one at a time.

<sup>8</sup> In general, changes in the corporate tax base are believed to have a larger effect on the location of investment than changes in the corporate tax rate do, so more of the change in burden from a change in the base is borne by labor. See Jim Nunns, *How TPC Distributes the Corporate Income Tax* (Washington, DC: Urban-Brookings Tax Policy Center, 2012).

<sup>9</sup> The lowest-income tax units would have a small decline in after-tax income from restoration of the health-related tax expenditures.

## APPENDIX A. LIST OF TAX EXPENDITURES

### JCT TAX EXPENDITURES

#### *Retirement-Related*

Net exclusion of pension contributions and earnings: Plans covering partners and sole proprietors (sometimes referred to as "Keogh" plans)

Net exclusion of pension contributions and earnings: Defined benefit plans

Net exclusion of pension contributions and earnings: Defined contribution plans

Individual retirement arrangements: Traditional IRAs

Individual retirement arrangements: Roth IRAs

Credit for certain individuals for elective deferrals and IRA contributions

Exclusion of veterans' pensions

#### *Health-Related*

Exclusion of employer contributions for health care, health insurance premiums, and long-term care insurance premiums

Exclusion of medical care and TRICARE medical insurance for military dependents, retirees, and retiree dependents not enrolled in Medicare

Exclusion of health insurance benefits for military retirees and retiree dependents enrolled in Medicare

Deduction for health insurance premiums and long-term care insurance premiums by the self-employed

Deduction for medical expenses and long-term care expenses

Exclusion of workers' compensation benefits (medical benefits)

Health savings accounts

Credit for purchase of health insurance by certain displaced persons

#### *Itemized Deduction for State and Local Taxes*

Deduction for property taxes on real property

Deduction of nonbusiness State and local government income taxes, sales taxes, and personal property taxes

#### *Itemized Deduction for Mortgage Interest*

Deduction for mortgage interest on owner-occupied residences

Deduction for premiums for qualified mortgage insurance

#### *Corporate Research and Experimentation-Related*

Credit for increasing research activities (Code section 41)

Expensing of research and experimental expenditures

## *Uncategorized*

Exclusion of benefits and allowances to armed forces personnel  
Exclusion of military disability benefits  
Deduction for overnight-travel expenses of national guard and reserve members  
Exclusion of combat pay  
Exclusion of certain allowances for Federal employees abroad  
Exclusion of foreign earned income: Housing  
Exclusion of foreign earned income: Salary  
Inventory property sales source rule exception  
Deduction for foreign taxes instead of a credit  
Interest expense allocation: Unavailability of symmetric worldwide method  
Interest expense allocation: Separate grouping of affiliated financial companies  
Apportionment of research and development expenses for determination of foreign tax credits  
Special rules for interest-charge domestic international sales corporations  
Tonnage tax  
Deferral of active income of controlled foreign corporations  
Deferral of active financing income  
Therapeutic research credit  
Credit for energy-efficient improvements to existing homes  
Credit for holders of clean renewable energy bonds (Code sections 54 and 54C)  
Exclusion of energy conservation subsidies provided by public utilities  
Credit for holders of qualified energy conservation bonds  
Energy credit (section 48): Solar  
Energy credit (section 48): Geothermal  
Energy credit (section 48): Fuel Cells  
Energy credit (section 48): Microturbines  
Energy credit (section 48): Combined heat and power  
Energy credit (section 48): Small wind  
Energy credit (section 48): Geothermal heat pump systems  
Credits for electricity production from renewable resources (section 45): Wind  
Credits for electricity production from renewable resources (section 45): Closed-loop biomass  
Credits for electricity production from renewable resources (section 45): Geothermal  
Credits for electricity production from renewable resources (section 45): Qualified hydropower  
Credits for electricity production from renewable resources (section 45): Small irrigation power  
Credits for electricity production from renewable resources (section 45): Municipal solid waste  
Credits for electricity production from renewable resources (section 45): Open-loop biomass  
Special rule to implement electric transmission restructuring  
Credits for investments in clean coal facilities  
Coal production credits: Refined coal  
Coal production credits: Indian coal  
Credits for alternative technology vehicles: Other alternative fuel vehicles  
Residential energy-efficient property credit  
Credit for plug-in electric vehicles  
Credit for investment in advanced energy property

Exclusion of interest on State and local government qualified private activity bonds for energy production facilities

Expensing of exploration and development costs, fuels: Oil and gas

Expensing of exploration and development costs, fuels: Other Fuels

Excess of percentage over cost depletion, fuels: Oil and gas

Excess of percentage over cost depletion, fuels: Other Fuels

Amortization of geological and geophysical expenditures associated with oil and gas exploration

Amortization of air pollution control facilities

Depreciation recovery periods for energy-specific items: Five-year MACRS for certain energy property (solar, wind, etc.)

Depreciation recovery periods for energy-specific items: 10-year MACRS for smart electric distribution property

Depreciation recovery periods for energy-specific items: 15-year MACRS for certain electric transmission property

Depreciation recovery periods for energy-specific items: 15-year MACRS for natural gas distribution line

Exceptions for publicly traded partnership with qualified income derived from certain energy-related activities

Special depreciation allowance for certain reuse and recycling property

Expensing of exploration and development costs, nonfuel minerals

Excess of percentage over cost depletion, nonfuel minerals

Expensing of timber-growing costs

Special rules for mining reclamation reserves

Special tax rate for nuclear decommissioning reserve funds

Exclusion of contributions in aid of construction for water and sewer utilities

Exclusion of earnings of certain environmental settlement funds

Amortization and expensing of reforestation expenditures

Capital gains treatment for qualified timber income (including coal and iron ore)

Treatment of income from exploration and mining of natural resources as qualifying income under the publicly-traded partnership rules

Expensing of soil and water conservation expenditures

Expensing of the costs of raising dairy and breeding cattle

Exclusion of cost-sharing payments

Exclusion of cancellation of indebtedness income of farmers

Income averaging for farmers and fishermen

Five-year carryback period for net operating losses attributable to farming

Expensing by farmers for fertilizer and soil conditioner costs

Cash accounting for agriculture

Exclusion of income attributable to the discharge of principal residence acquisition indebtedness

Exclusion of capital gains on sales of principal residences

Exclusion of interest on State and local government qualified private activity bonds for owner-occupied housing

Credit for low-income housing

Credit for rehabilitation of historic structures

Credit for rehabilitation of structures, other than historic structures

Exclusion of interest on State and local government qualified private activity bonds for rental housing

Depreciation of rental housing in excess of alternative depreciation system

Exclusion of interest on State and local government small-issue qualified private activity bonds

Carryover basis of capital gains on gifts

Deferral of gain on non-dealer installment sales

Deferral of gain on like-kind exchanges

Expensing under section 179 of depreciable business property

Amortization of business startup costs

Reduced rates on first \$10,000,000 of corporate taxable income

Exemptions from imputed interest rules

Expensing of magazine circulation expenditures

Special rules for magazine, paperback book, and record returns

Completed contract rules

Cash accounting, other than agriculture

Credit for employer-paid FICA taxes on tips

Deduction for income attributable to domestic production activities

Credit for the cost of carrying tax-paid distilled spirits in wholesale inventories

Reduced rates of tax on dividends and long-term capital gains

Surtax on net investment income

Exclusion of capital gains at death

Expensing of costs to remove architectural and transportation barriers to the handicapped and elderly

Exclusion for gain from certain small business stock

Distributions in redemption of stock to pay various taxes imposed at death

Exclusion from UBTI of certain payments to controlling exempt organizations

Inventory methods and valuation: Last in first out

Inventory methods and valuation: Lower of cost or market

Inventory methods and valuation: Specific identification for homogeneous products

Exclusion of gain or loss on sale or exchange of brownfield property

Income recognition rule for gain or loss from section 1256 contracts

Net alternative minimum tax attributable to net operating loss limitation

Exclusion of interest on State and local qualified private activity bonds for green buildings and sustainable design projects

Depreciation of buildings other than rental housing in excess of alternative depreciation system

Depreciation of equipment in excess of the alternative depreciation system

Exemption of credit union income

Small life insurance company taxable income adjustment

Special treatment of life insurance company reserves

Special deduction for Blue Cross and Blue Shield companies

Tax-exempt status and election to be taxed only on investment income for certain small property and casualty insurance companies

Interest rate and discounting period assumptions for reserves of property and casualty insurance companies

Proration for property and casualty insurance companies

Exclusion of employer-paid transportation benefits (parking, van pools, and transit passes)

Deferral of tax on capital construction funds of shipping companies  
Exclusion of interest on State and local government qualified private activity bonds for highway projects and rail-truck transfer facilities  
Exclusion of interest on State and local government qualified private activity bonds for high-speed intercity rail facilities  
Exclusion of interest on State and local government qualified private activity bonds for private airports, docks, and mass-commuting facilities  
Provide a 50 percent tax credit for certain expenditures for maintaining railroad tracks  
Empowerment zone tax incentives  
New markets tax credit  
District of Columbia tax incentives  
Credit for Indian reservation employment  
Exclusion of interest on State and local government qualified private activity bonds for sewage, water, and hazardous waste facilities  
Recovery zone economic development bonds  
Eliminate requirement that financial institutions allocate interest expense attributable to tax-exempt interest  
National disaster relief  
Deduction for interest on student loans  
Exclusion of earnings of Coverdell education savings accounts  
Exclusion of scholarship and fellowship income  
Exclusion of income attributable to the discharge of certain student loan debt and NHSC and certain State educational loan repayments  
Exclusion of employer-provided education assistance benefits  
Exclusion of employer-provided tuition reduction benefits  
Parental personal exemption for students aged 19 to 23  
Exclusion of interest on State and local government qualified private activity bonds for student loans  
Exclusion of interest on State and local government qualified private activity bonds for private nonprofit and qualified public educational facilities  
Credit for holders of qualified zone academy bonds  
Deduction for higher education expenses  
Deduction for teacher classroom expenses  
Deduction for charitable contributions to educational institutions  
Credits for tuition for post-secondary education  
Exclusion of tax on earnings of qualified tuition programs: Prepaid tuition programs  
Exclusion of tax on earnings of qualified tuition programs: Savings account programs  
Qualified school construction bonds  
Exclusion of employee meals and lodging (other than military)  
Exclusion of benefits provided under cafeteria plans  
Exclusion of housing allowances for ministers  
Exclusion of miscellaneous fringe benefits  
Exclusion of employee awards  
Exclusion of income earned by voluntary employees' beneficiary associations  
Special tax provisions for employee stock ownership plans (ESOPs)  
Deferral of taxation on spread on acquisition of stock under incentive stock option plans



Deferral of taxation on spread on employee stock purchase plans  
 Disallowance of deduction for excess parachute payments (applicable if payments to a disqualified individual are contingent on a change of control of a corporation and are equal to or greater than three times the individual's annualized includible compensation)  
 Limits on deductible compensation  
 Work opportunity tax credit  
 Credit for children under age 17  
 Credit for child and dependent care and exclusion of employer-provided child care  
 Credit for employer-provided dependent care  
 Exclusion of certain foster care payments  
 Adoption credit and employee adoption benefits exclusion  
 Deduction for charitable contributions, other than for education and health  
 Credit for disabled access expenditures  
 Exclusion of interest on State and local government qualified private activity bonds for private nonprofit hospital facilities  
 Deduction for charitable contributions to health organizations  
 Credit for orphan drug research  
 Tax credit for small businesses purchasing employer insurance  
 Subsidies for insurance purchased through health benefit exchanges  
 Exclusion of amounts received under life insurance contracts  
 Exclusion of workers' compensation benefits (disability and survivors payments)  
 Exclusion of damages on account of personal physical injuries or physical sickness  
 Exclusion of special benefits for disabled coal miners  
 Exclusion of other employee benefits: Premiums on group term life insurance  
 Exclusion of other employee benefits: Premiums on accident and disability insurance  
 Additional standard deduction for the blind and the elderly  
 Deduction for casualty and theft losses  
 Earned income credit  
 Phase out of the personal exemption for the regular income tax, and disallowance of the personal exemption and the standard deduction against the alternative minimum tax  
 Exclusion of survivor annuities paid to families of public safety officers killed in the line of duty  
 Exclusion of disaster mitigation payments  
 ABLE accounts  
 Exclusion of untaxed Social Security and railroad retirement benefits  
 Exclusion of veterans' disability compensation  
 Exclusion of veterans' readjustment benefits  
 Exclusion of interest on State and local government qualified private activity bonds for veterans' housing  
 Exclusion of interest on public purpose State and local government bonds  
 Build America bonds  
 Deferral of interest on savings bonds

## **OTHER CORPORATE PROVISIONS (FROM FY 2017 BUDGET)**

- Impose a 19 percent minimum tax on foreign income



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