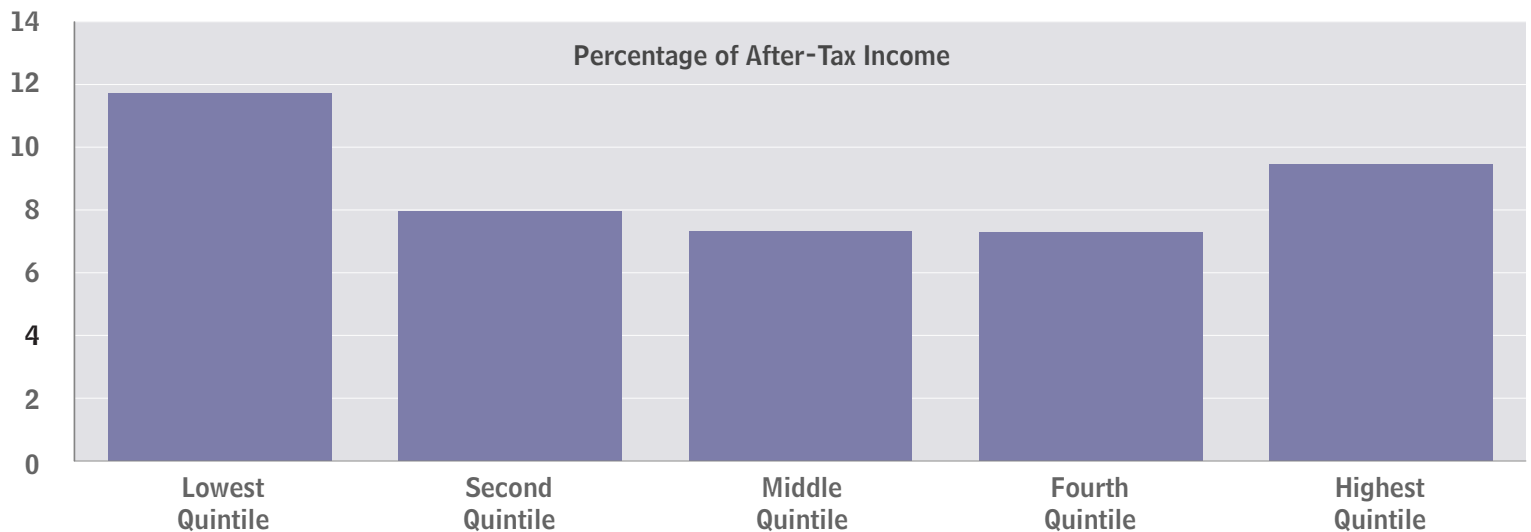
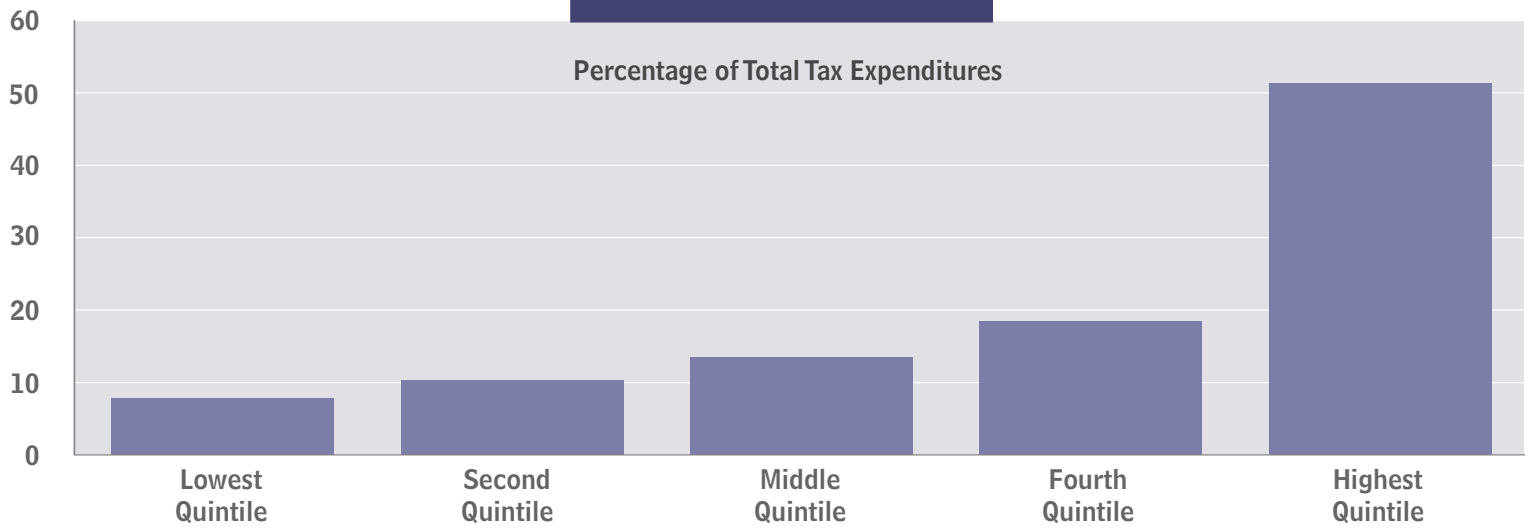


# CBO

## The Distribution of Major Tax Expenditures in the Individual Income Tax System



Estimated Distribution of Major Tax Expenditures, by Income Group, 2013, Including Forgone Income Tax and Payroll Tax Revenues

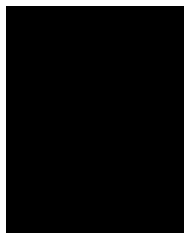
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## Notes

Unless otherwise indicated, the years referred to in this report are calendar years.

Numbers in the text and tables may not add up to totals because of rounding.

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# The Distribution of Major Tax Expenditures in the Individual Income Tax System

## Summary

A number of exclusions, deductions, preferential rates, and credits in the federal tax system cause revenues to be much lower than they would be otherwise for any given structure of tax rates. Some of those provisions—in both the individual and corporate income tax systems—are termed “tax expenditures” because they resemble federal spending by providing financial assistance to specific activities, entities, or groups of people. Tax expenditures, like traditional forms of federal spending, contribute to the federal budget deficit; influence how people work, save, and invest; and affect the distribution of income.

This report examines how 10 of the largest tax expenditures in the individual income tax system in 2013 are distributed among households with different amounts of income.<sup>1</sup> Those expenditures are grouped into four categories:

- Exclusions from taxable income—
  - Employer-sponsored health insurance,
  - Net pension contributions and earnings,
  - Capital gains on assets transferred at death, and
  - A portion of Social Security and Railroad Retirement benefits;

- Itemized deductions—
  - Certain taxes paid to state and local governments,
  - Mortgage interest payments, and
  - Charitable contributions;
- Preferential tax rates on capital gains and dividends; and
- Tax credits—
  - The earned income tax credit, and
  - The child tax credit.

Some of the provisions of law that reduce the amount of taxable income under the individual income tax also decrease the amount of earnings subject to payroll taxes. The figures presented in this report are generally based on the reduction in payroll taxes as well as the reduction in income taxes, but some figures separate those two effects. (Provisions that reduce payroll tax receipts generally reduce future Social Security benefits as well; that effect is not analyzed in this report.)

## How Do Tax Expenditures Affect the Federal Budget?

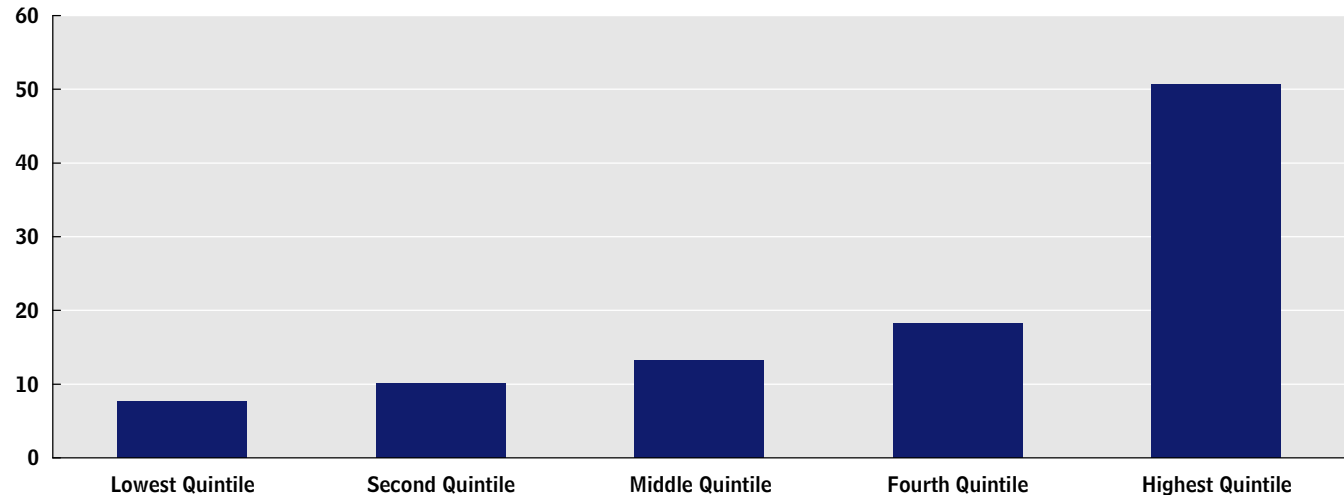
Although the 10 major tax expenditures listed here represent a small fraction of the more than 200 tax expenditures in the individual and corporate income tax systems, they will account for roughly two-thirds of the total budgetary effects of all tax expenditures in fiscal year 2013, the Congressional Budget Office (CBO) estimates. Together, those 10 tax expenditures are estimated to total more than \$900 billion, or 5.7 percent of gross domestic product (GDP), in fiscal year 2013 and are projected to amount to nearly \$12 trillion, or 5.4 percent of GDP, over the 2014–2023 period. In addition,

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1. The 10 tax expenditures examined in this report are the ones with the largest effects on individual income taxes in fiscal year 2013, except for the exclusion from taxable income of Medicare benefits, as discussed later. Although that group represents the largest tax expenditures in 2013, the size and composition of the largest tax expenditures change over time. In particular, subsidies for participation in health insurance exchanges that take effect beginning in 2014 are projected to be among the largest tax expenditures in later years.

**Summary Figure 1.****Shares of Selected Major Tax Expenditures, 2013**

(Percent)



Source: Congressional Budget Office.

Notes: Quintiles, or fifths, are created by ranking households by their before-tax income. Quintiles contain equal numbers of people.

The selected major tax expenditures are the exclusion of employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums; the exclusion of net pension contributions and earnings; the exclusion of capital gains on assets transferred at death; the exclusion of a portion of Social Security and Railroad Retirement benefits; the deduction for mortgage interest on owner-occupied residences; the deduction of nonbusiness state and local government income, sales, real estate, and personal property taxes; the deduction for charitable contributions; reduced rates on dividends and long-term capital gains; the earned income tax credit; and the child tax credit.

The expenditures for the exclusion of employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums and for the exclusion of net pension contributions and earnings include the effect on payroll taxes. The expenditures for the earned income tax credit and the child tax credit include the effect on outlays.

Because estimates of tax expenditures are based on people's behavior with the tax expenditures in place, the estimates do not reflect the amount of revenue that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

tax credits to subsidize premiums for health insurance provided through new exchanges to be established under the Affordable Care Act will represent a new tax expenditure beginning in 2014, estimated to equal 0.4 percent of GDP over the 2014–2023 period.<sup>2</sup>

**How Are Tax Expenditures Distributed Among Households?**

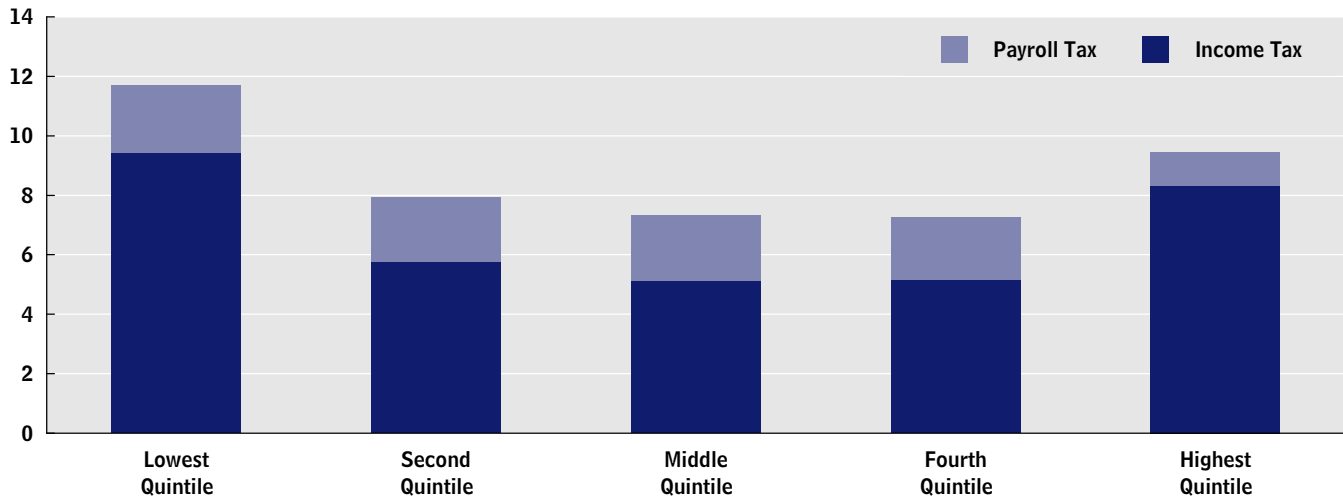
The 10 major tax expenditures considered here are distributed unevenly across the income scale. In calendar year 2013, more than half of the combined benefits of those tax expenditures will accrue to households with income in the highest quintile (or one-fifth) of the population (with 17 percent going to households in the top 1 percent of the population), CBO estimates. In contrast, 13 percent of those tax expenditures will accrue to households in the middle quintile, and only 8 percent

will accrue to households in the lowest quintile (see Summary Figure 1).

2. The Affordable Care Act comprises the Patient Protection and Affordable Care Act (Public Law 111-148) and the health care provisions of the Health Care and Education Reconciliation Act of 2010 (P.L. 111-152) and, in the case of this document, the effects of subsequent related judicial decisions, statutory changes, and administrative actions. For more information on CBO and JCT's projections of subsidies under the Affordable Care Act, see Congressional Budget Office, *Updated Budget Projections: Fiscal Years 2013 to 2023* (May 2013), [www.cbo.gov/publication/44172](http://www.cbo.gov/publication/44172), and "CBO's Estimate of the Net Budgetary Impact of the Affordable Care Act's Health Insurance Coverage Provisions Has Not Changed Much Over Time," *CBO Blog* (May 14, 2013), [www.cbo.gov/publication/44176](http://www.cbo.gov/publication/44176). The tax expenditure that will arise from premium assistance credits will represent only part of the total subsidies to be provided through exchanges; subsidies of cost-sharing expenses for health insurance, which are not included in this analysis, will represent the other major part.

**Summary Figure 2.****Selected Major Tax Expenditures as a Share of Income, by Income Group, 2013**

(Percentage of after-tax income)



Source: Congressional Budget Office.

Notes: Quintiles, or fifths, are created by ranking households by their before-tax income. Quintiles contain equal numbers of people.

The selected major tax expenditures are the exclusion of employers' contributions for health care, health insurance premiums, and long-term care insurance premiums; the exclusion of net pension contributions and earnings; the exclusion of capital gains on assets transferred at death; the exclusion of a portion of Social Security and Railroad Retirement benefits; the deduction for mortgage interest on owner-occupied residences; the deduction of nonbusiness state and local government income, sales, real estate, and personal property taxes; the deduction for charitable contributions; reduced rates on dividends and long-term capital gains; the earned income tax credit; and the child tax credit.

The expenditures for the exclusion of employers' contributions for health care, health insurance premiums, and long-term care insurance premiums and for the exclusion of net pension contributions and earnings include the effect on payroll taxes. The expenditures for the earned income tax credit and the child tax credit include the effect on outlays.

Because estimates of tax expenditures are based on people's behavior with the tax expenditures in place, the estimates do not reflect the amount of revenue that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

When measured relative to after-tax income, those 10 major tax expenditures are largest for the lowest and highest income quintiles. In calendar year 2013, CBO estimates, the combined benefits will equal nearly 12 percent of after-tax income for households in the lowest income quintile, more than 9 percent for households in the highest quintile, and less than 8 percent for households in the middle three quintiles (see Summary Figure 2).

The distribution of tax expenditures across the income scale varies considerably among the different tax expenditures. For example, CBO estimates that more than 90 percent of the benefits of reduced tax rates on capital gains and dividends will accrue to households in the highest income quintile in 2013, with almost 70 percent going to households in the top percentile. Those benefits will equal 2 percent of after-tax income for the highest

quintile and 5 percent of after-tax income for households in the top percentile. In contrast, about half of the benefits of the earned income tax credit will accrue to households in the lowest income quintile, equaling 6 percent of after-tax income for households in that group.

Tax credits that will provide assistance in paying premiums in health insurance exchanges are excluded from the distributional results presented here because they are not in effect in 2013. When those tax credits come into effect, they will appreciably increase tax expenditures for households in the lower and middle income quintiles. Individuals and families who have income between 100 percent and 400 percent of the federal poverty guidelines and who meet certain other requirements will be eligible for those credits.

### How Do Tax Expenditure Estimates Differ From Revenue Estimates?

Estimates of tax expenditures are traditionally intended to measure the difference between households' tax liabilities under present law and the tax liabilities they would have incurred if the provisions generating those tax expenditures were repealed but households' behavior was unchanged. Such estimates do not represent the amount of revenues that would be raised if those provisions were eliminated, because the changes in incentives that would result from eliminating those provisions would lead households to modify their behavior in ways that would mute the impact on revenues. For example, if the preferential tax rates on capital gains realizations were eliminated, taxpayers would reduce the amount of capital gains they realized. Because the size of that tax expenditure is estimated on the basis of the gains that are projected to be realized with the preferential rates in place, the amount of additional revenues that would be received if those preferences were eliminated would be smaller than the reported tax expenditure.

### An Overview of Tax Expenditures

Tax expenditures are "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," according to the Congressional Budget and Impoundment Control Act of 1974. That law requires that a list of tax expenditures be included in the federal budget.<sup>3</sup> The Administration and the Congress publish estimates of individual and corporate income tax expenditures, prepared by the Department of the Treasury's Office of Tax Analysis and the staff of the Congress's Joint Committee on Taxation (JCT), respectively.<sup>4</sup>

Tax expenditures have a significant impact on the federal budget and address a wide range of policy goals. They are similar in many respects to spending programs, although their budgetary treatment differs. Estimates of tax expenditures have some distinctive characteristics that are important to consider when interpreting those estimates.

### Impact on the Federal Budget

On the basis of estimates prepared by JCT, the Congressional Budget Office projects that the 10 major

tax expenditures in the individual income tax code considered in this report will total nearly \$12 trillion—or 5.4 percent of gross domestic product—during fiscal years 2014 through 2023.<sup>5</sup> The 10 tax expenditures examined in this report are the ones with the largest effects on individual income taxes in fiscal year 2013, according to JCT's estimates—except for the exclusion from taxable income of Medicare benefits, as discussed below. In addition, tax credits that will provide assistance in paying premiums in health insurance exchanges, which are not in effect in 2013, are estimated to equal 0.5 percent of GDP over the 2014–2023 period.

CBO's projection incorporates interactions among the provisions of law that generate the tax expenditures, and it includes the effects on both income taxes and payroll taxes. The effect on payroll taxes arises because some of the provisions of law that reduce the amount of taxable income under the income tax also decrease the amount of earnings subject to payroll taxes. (Provisions that reduce payroll tax receipts generally reduce future spending for Social Security benefits because those benefits are based on earnings subject to Social Security taxes; that effect on future government spending is not analyzed in this report.) In fiscal year 2013, those 10 major tax expenditures, taken together, will equal about one-third of total federal revenues and will exceed spending on Social Security, defense, or Medicare net of beneficiaries'

4. See Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2012–2017*, JCS-1-13 (February 1, 2013), [www.jct.gov/publications.html?func=fileinfo&cid=4503](http://www.jct.gov/publications.html?func=fileinfo&cid=4503); and Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2013: Analytical Perspectives* (February 2012), Chapter 17, [www.gpo.gov/fdsys/search/pagedetails.action?granuleId=&packageId=BUDGET-2013-PER](http://www.gpo.gov/fdsys/search/pagedetails.action?granuleId=&packageId=BUDGET-2013-PER). For additional background on tax expenditures, see Senate Committee on the Budget, *Tax Expenditures: Compendium of Background Material on Individual Provisions*, S. Prt. 112-45 (prepared by the Congressional Research Service, December 2012), [www.gpo.gov/fdsys/pkg/CPRT-112SPRT77698/pdf/CPRT112SPRT77698.pdf](http://www.gpo.gov/fdsys/pkg/CPRT-112SPRT77698/pdf/CPRT112SPRT77698.pdf) (53 MB).

5. CBO extrapolated JCT's estimates for the 2012–2017 period through 2023. JCT defines tax expenditures as deviations from an individual income tax structure that incorporates the existing regular tax rates, standard deduction, personal exemptions, and deduction of business expenses. CBO combined the components of certain tax expenditures that JCT reports separately, such as tax expenditures for different types of charitable deductions and for different types of net pension contributions and earnings. See Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2012–2017*, JCS-1-13 (February 1, 2013), [www.jct.gov/publications.html?func=fileinfo&cid=4503](http://www.jct.gov/publications.html?func=fileinfo&cid=4503).

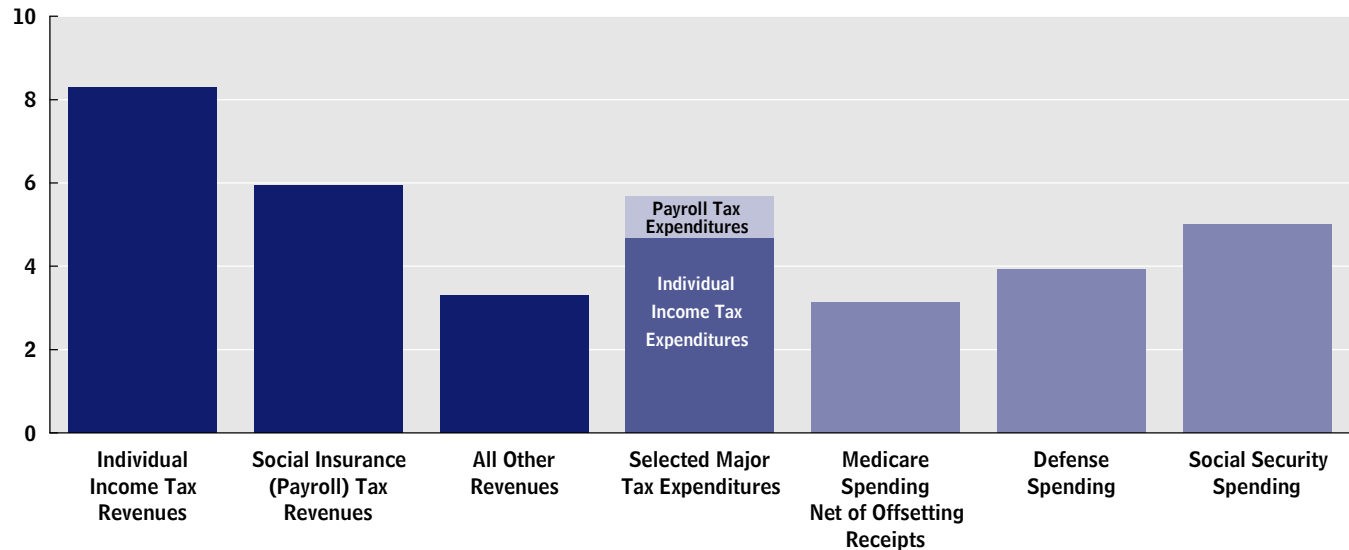
3. Sec. 3(3) of the Congressional Budget and Impoundment Control Act of 1974, P.L. 93-344 (codified at 2 U.S.C. §622(3) (2006)).



**Figure 1.**

## Selected Components of Revenues, Major Tax Expenditures, and Spending, Fiscal Year 2013

(Percentage of gross domestic product)



Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

Notes: The selected major tax expenditures are the exclusion of employers' contributions for health care, health insurance premiums, and long-term care insurance premiums; the exclusion of net pension contributions and earnings; the exclusion of capital gains on assets transferred at death; the exclusion of a portion of Social Security and Railroad Retirement benefits; the deduction for mortgage interest on owner-occupied residences; the deduction of nonbusiness state and local government income, sales, real estate, and personal property taxes; the deduction for charitable contributions; reduced rates on dividends and long-term capital gains; the earned income tax credit; and the child tax credit.

The expenditures for the exclusion of employers' contributions for health care, health insurance premiums, and long-term care insurance premiums and for the exclusion of net pension contributions and earnings include the effect on payroll taxes. The expenditures for the earned income tax credit and the child tax credit include the effect on outlays.

Because estimates of tax expenditures are based on people's behavior with the tax expenditures in place, the estimates do not reflect the amount of revenue that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

premiums and other offsetting receipts, CBO estimates (see Figure 1).

The size of tax expenditures depends on many features of tax law and on economic conditions. Since the Tax Reform Act of 1986 reduced or eliminated many tax expenditures, total individual and corporate income tax expenditures (not including forgone payroll taxes) have risen, on balance, from less than 6 percent of GDP to more than 7 percent of GDP. In addition, the composition of tax expenditures has changed significantly over time.<sup>6</sup> For example, tax legislation has introduced and expanded the child tax credit, expanded the earned income tax credit, lowered and also raised the preferential tax rate for long-term capital gains (the profit when an investment held for more than one year is sold), and

introduced a preferential tax rate for dividends. Also since 1986, the tax expenditure for the exclusion from taxable income of employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums (hereafter described as the exclusion for employer-sponsored health insurance, or ESI) has grown by more than two-thirds as a share of GDP, primarily because of rapid growth in health care spending. Tax expenditures associated with the preferential rate on

6. For details on the history of tax expenditures, see Joint Committee on Taxation, *Background Information on Tax Expenditure Analysis and Historical Survey of Tax Expenditure Estimates*, JCX-15-11 (February 28, 2011), [www.jct.gov/publications.html?func=fileinfo&id=3740](http://www.jct.gov/publications.html?func=fileinfo&id=3740); and Thomas L. Hungerford, *Tax Expenditures and the Federal Budget*, Report for Congress RL34622 (Congressional Research Service, June 1, 2011).

**Table 1.****Budgetary Effects of Selected Major Tax Expenditures, Fiscal Years 2013 to 2023**

	2013		2014 to 2023	
	Billions of Dollars	Percentage of GDP	Billions of Dollars	Percentage of GDP
Exclusions from Taxable Income				
Employer-sponsored health insurance <sup>a</sup>	248	1.5	3,360	1.6
Net pension contributions and earnings <sup>a</sup>	137	0.9	1,999	0.9
Capital gains on assets transferred at death	43	0.3	644	0.3
A portion of Social Security and Railroad Retirement benefits	33	0.2	414	0.2
Deductions				
State and local taxes	77	0.5	1,098	0.5
Mortgage interest	70	0.4	1,011	0.5
Charitable contributions	39	0.2	568	0.3
Preferential Tax Rates on Capital Gains and Dividends	161	1.0	1,340	0.6
Credits				
Earned income tax credit <sup>b</sup>	61	0.4	661	0.3
Child tax credit <sup>b</sup>	57	0.4	549	0.3
<b>Memorandum:</b>				
Credits for Premiums in Health Insurance Exchanges <sup>b</sup>	0	0	920	0.4

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

Notes: Because estimates of tax expenditures are based on people's behavior with the tax expenditures in place, the estimates do not reflect the amount of revenue that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

The exclusion from taxable income of employer-sponsored health insurance includes employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums.

GDP = gross domestic product.

a. Includes effect on payroll taxes.

b. Includes effect on outlays.

capital gains and the exclusion of unrealized capital gains on assets transferred at death are particularly volatile, rising and falling over time with the prices of stocks and other assets.

The exclusion for employer-sponsored health insurance is the single largest tax expenditure in the individual income tax code. Including the forgone payroll taxes, that expenditure is projected to equal 1.5 percent of GDP in fiscal year 2013 and 1.6 percent of GDP between 2014 and 2023 (see Table 1). The exclusion of net pension contributions and earnings is the second-largest tax expenditure over the next decade, equaling 0.9 percent of GDP in fiscal year 2013 and during the 2014–2023 period. The tax expenditure arising from preferential tax rates on dividends and long-term capital gains is expected to total 1.0 percent of GDP in fiscal year 2013 and about

0.6 percent of GDP over the ensuing decade; the deduction for taxes paid to state and local governments is expected to equal 0.5 percent of GDP both in fiscal year 2013 and in the following decade; and the deduction for interest paid on mortgages for owner-occupied residences is estimated to equal 0.4 percent of GDP in fiscal year 2013 and 0.5 percent of GDP over the next decade.<sup>7</sup> The other five tax expenditures examined here are each

7. CBO and JCT estimate that a significant amount of capital gains realizations and dividend payouts were accelerated into calendar year 2012 in anticipation of the tax rate increases that were scheduled to take effect in 2013. Because the taxes owed on those capital gains will probably be paid mostly in calendar year 2013, that shifting boosts the estimated amount of the fiscal year 2013 tax expenditure.

projected to equal between 0.2 percent and 0.4 percent of GDP in fiscal year 2013 and during the 2014–2023 period.

One tax expenditure that is not examined in this report is the exclusion from taxable income of Medicare benefits. JCT considers the exclusion of benefits under Medicare Part A that are in excess of the Part A payroll taxes paid by beneficiaries during their working years to be a tax expenditure, which is estimated to equal 0.2 percent of GDP in fiscal year 2013.<sup>8</sup> JCT also considers the exclusion of benefits under Medicare Part B in excess of the premiums paid by beneficiaries to be a tax expenditure, also equal to 0.2 percent of GDP in fiscal year 2013, and the exclusion of benefits under Medicare Part D to be a tax expenditure, equal to less than 0.1 percent of GDP.<sup>9</sup> CBO's distributional analysis omitted the exclusion of Medicare benefits: Analysis of the distribution of that exclusion would be quite uncertain, as the distribution depends critically on the lifetime Medicare payroll taxes paid by beneficiaries (about which CBO does not have adequate data) and on how Medicare benefits are distributed among individual households (for which estimates based on actual health care expenditures, for example, would differ substantially from estimates based on amounts of health insurance premiums).

Other, smaller health-related tax expenditures (such as the itemized deduction for medical expenses, the tax-favored treatment of health savings accounts, and the health insurance deduction for self-employed workers) are also excluded from this analysis. Including the ESI and Medicare exclusions, total health-related tax expenditures are estimated to equal 2.2 percent of GDP in fiscal year 2013. That amount rivals federal outlays for the two biggest health care programs, Medicare (for which spending net of beneficiaries' premiums and other offsetting receipts equals 3.1 percent of GDP) and Medicaid (for which federal spending is 1.7 percent of GDP).

8. In contrast with JCT's approach, the Department of the Treasury does not list the exclusion of Medicare benefits as a tax expenditure. Only untaxed cash transfer payments from the government are considered tax expenditures by the Treasury.

9. Part A of Medicare covers hospitalization; Part B covers doctors' services, outpatient care, home health services, and other medical services; and Part D covers outpatient prescription drugs. Part C specifies the rules under which private health care plans can assume responsibility for, and be compensated for, providing benefits under Parts A, B, and D.

Tax credits that will provide assistance in paying premiums in new health insurance exchanges to be established under the Affordable Care Act will represent a new tax expenditure beginning in 2014. CBO and JCT estimate that those tax credits will equal 0.2 percent of GDP in 2015 and grow to 0.5 percent of GDP by 2023. The Affordable Care Act also put in place a new excise tax on health insurance plans with relatively high premiums, which is scheduled to take effect in 2018. CBO and JCT expect that tax to restrain spending on employer-sponsored health insurance, which will reduce the ESI tax expenditure relative to what would otherwise have occurred.

### Policy Goals

The provisions of law that lead to tax expenditures are generally designed to further societal goals. For example, the tax expenditures for health insurance costs, pension contributions, and mortgage interest payments may help to promote a healthier population, adequate financial resources for retirement and greater national saving, and stable communities of homeowners. However, tax expenditures have a broad range of effects that do not always further societal goals.

First, tax expenditures may lead to an inefficient allocation of economic resources by encouraging more consumption of goods and services receiving preferential treatment; they also may subsidize activity that would have taken place without the tax incentives. For example, the tax expenditures mentioned above may prompt people to be less cost-conscious in their use of health care services than they would be in the absence of the tax expenditure for health insurance costs; to reallocate existing savings from accounts that are not tax-preferred to retirement accounts, rather than add to their savings; and to purchase more expensive homes, investing too much in housing and too little elsewhere relative to what they would do if all investments were treated equally.

Second, by providing benefits to specific activities, entities, or groups of people, tax expenditures increase the size and scope of federal involvement in the economy. Indeed, adding tax expenditures to conventional federal outlays makes the federal government appear notably larger relative to GDP.<sup>10</sup>

10. For more details, see Donald Marron and Eric Toder, *How Big Is the Federal Government?* (Urban-Brookings Tax Policy Center, March 26, 2012), [www.taxpolicycenter.org/publications/url.cfm?ID=412528](http://www.taxpolicycenter.org/publications/url.cfm?ID=412528).

Third, tax expenditures reduce the amount of revenue that is collected for any given set of statutory tax rates—and thereby require higher rates to collect any chosen amount of revenue. All else being equal, those higher tax rates lessen people's incentives to work and save and therefore decrease output and income. At the same time, some tax expenditures more directly affect output and income. For example, the preferential rate on capital gains and dividends raises the after-tax return on some forms of saving, which tends to increase saving and boost future output. As another example, the increase in take-home pay arising from the earned income tax credit appears to encourage work effort by some people.

Fourth, tax expenditures have mixed effects on the societal goal of limiting the complexity of the tax code. On the one hand, most tax expenditures, such as itemized deductions and tax credits, require that taxpayers keep additional records and make additional calculations, increasing the complexity of the tax code. On the other hand, some exclusions from taxable income simplify the tax code by eliminating recordkeeping requirements and the need for certain calculations. For example, in the absence of the exclusion for capital gains on assets transferred at death, taxpayers would need to calculate the appreciation in the value of their assets since the original purchase—a calculation that would require records of the purchase of assets acquired by deceased benefactors, perhaps many decades earlier.

Fifth, tax expenditures affect the distribution of the tax burden in ways that may not always be recognized, both among people at different income levels and among people who have similar income but differ in other ways. This report analyzes those distributional effects.

### Comparison With Spending Programs

Both tax expenditures and spending programs provide financial assistance for particular activities, entities, or groups of people. Through that assistance, tax expenditures and spending programs alter people's behavior, change the allocation of resources in the economy, and transfer income among households. Indeed, many tax expenditures could instead be implemented as government spending programs that would have economic effects similar to those of the tax expenditures. However, the budgetary treatment and administration of such spending programs would be quite different from those of the tax expenditures.

From a budgetary perspective, tax expenditures are more like mandatory spending (spending for programs that is generally determined by setting eligibility rules and benefit formulas) than like discretionary spending (which is governed by the annual appropriation process). In particular, tax expenditures generally are not subject to appropriations, and any person or entity that meets the requirements for them can receive the benefits.<sup>11</sup> Unlike mandatory spending, however, tax expenditures usually are not recorded separately in the federal budget: Although tax expenditures reduce the amount of revenue received by the government and recorded in the budget, the amount of forgone revenue that is attributable to specific tax expenditures or to all tax expenditures is not recorded. The exception to that approach involves the refundable portion of tax credits, which is treated in the budget as a government outlay. Because of the budgetary treatment of tax expenditures, their costs are much less transparent than the costs of spending programs.

From an administrative perspective, tax expenditures arise through the operation of the tax code and are generally administered by the Internal Revenue Service (IRS); in contrast, most spending programs are administered by specialized agencies with expertise in the relevant programs and issues. On the one hand, that distinction reduces the cost of administering a tax expenditure compared with an analogous spending program. For a tax expenditure, no new administrative structure needs to be created, and the detailed financial information that the IRS already collects about taxpayers offers the potential for improved oversight and targeting of the expenditure. On the other hand, the IRS may lack the resources, knowledge, and institutional focus to manage activities that are unrelated to the agency's primary mission of revenue collection.

### Key Features of CBO's Estimates

To conduct the analysis in this report, CBO estimated the magnitude of each tax expenditure for each household as the difference between the household's tax liability under present law and the tax liability it would have if the provisions generating that tax expenditure were repealed but the household's behavior was unchanged.

11. However, some smaller tax expenditures, such as the low-income housing tax credit and certain energy tax credits enacted in 2009, have budget ceilings and procedures to allocate the budgeted amount among taxpayers who apply for the credits.

Five features of those estimates bear emphasis (more details on CBO's estimation approach are discussed in the appendix).

First, those estimates of tax expenditures are not estimates of the additional revenues that would be raised if the relevant provisions of law were eliminated, because the estimates do not account for the way taxpayers would change their behavior as a result. For example, if the preferential tax rates on capital gains realizations were eliminated, taxpayers would reduce the amount of capital gains they realized. Because the size of that tax expenditure is estimated on the basis of the gains that are projected to be realized with the preferential rates in place, the amount of additional revenues that would be received if that preference was eliminated would be smaller than the estimated size of the tax expenditure.

Second, those estimates allocate the expenditures to the taxpayers who benefit directly from them, even though those expenditures may affect other people as well. For example, CBO's estimates of the distribution of the tax expenditure for the deduction of mortgage interest leave aside any effect of that expenditure on the amount of mortgage debt or on housing values.

Third, the estimated magnitude of a collection of tax expenditures may differ from the sum of the estimated magnitudes of the separate expenditures because of the interactions that arise among expenditures.

Fourth, this analysis differs from most other analyses of tax expenditures by including forgone payroll taxes in addition to forgone individual income taxes in both the aggregate amount and the distribution of tax expenditures. CBO chose to include the effects on payroll taxes because those effects follow naturally from the provisions of law that create tax expenditures in the individual income tax. If, instead, the analysis excluded the forgone payroll taxes, the distribution of tax expenditures would be somewhat less progressive (or more skewed toward higher-income households) than is reported here.

Finally, tax expenditures are measured relative to a comprehensive income tax system. If tax expenditures were evaluated relative to an alternative tax system—for instance, a comprehensive consumption tax, such as a national retail sales tax or a value-added tax—some of the 10 major tax expenditures analyzed here would not be considered tax expenditures. For example, because a consumption tax would exclude all savings and investment

income from taxation, the exclusion of net pension contributions and earnings would be considered part of the normal tax system and not a tax expenditure.

## The Distribution of a Set of Selected Tax Expenditures

Tax expenditures are distributed unevenly across the income scale. When measured in dollars, tax expenditures benefit higher-income households much more than lower-income households. When measured relative to income, tax expenditures benefit households in the lowest and highest income groups to a greater extent than households in the middle of the income distribution.<sup>12</sup> If payroll tax effects were excluded from these estimates, the distribution of tax expenditures would appear somewhat less progressive than what is shown here but not fundamentally different.

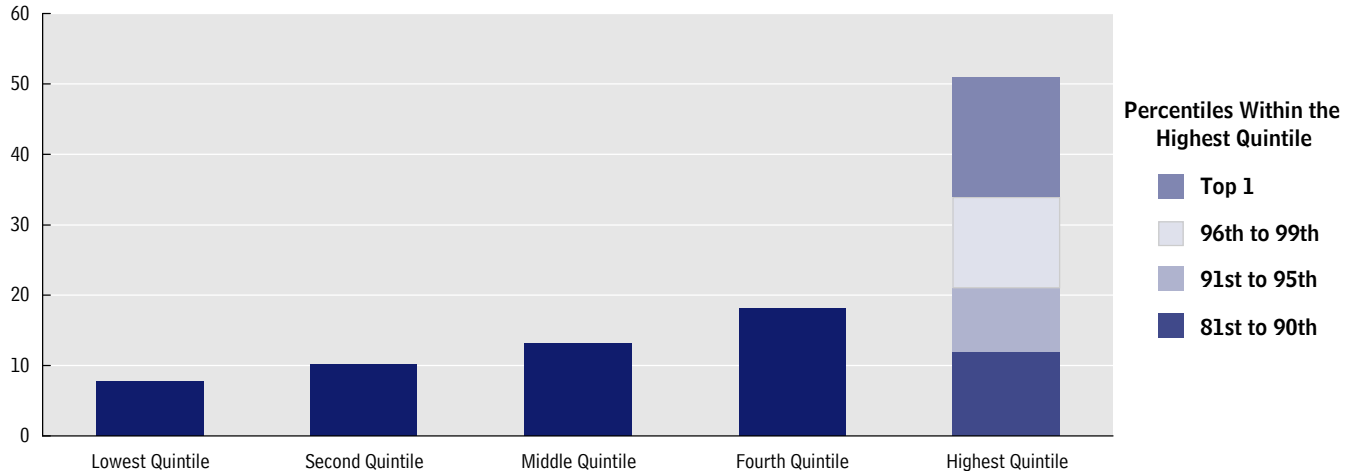
### Distribution in Dollars

Higher-income households benefit significantly more from tax expenditures in dollar terms than do lower-income households. For 2013, CBO estimates that 51 percent of the total benefits from the 10 major tax expenditures analyzed in this report will accrue to households that make up the one-fifth of people with the highest before-tax income, 13 percent will accrue to households in the middle quintile, and 8 percent will accrue to households in the bottom quintile (see Figure 2).

12. Various analysts have assessed the distributional effects of tax expenditures. JCT regularly includes estimates of the distribution of selected tax expenditures in its annual estimates of aggregate expenditures. In addition, several nongovernmental researchers have analyzed the distribution of selected tax expenditures and of tax expenditures as a whole. See, for example, Eric Toder and Daniel Baneman, *Distributional Effects of Individual Income Tax Expenditures: An Update* (Urban-Brookings Tax Policy Center, February 2, 2012), [www.taxpolicycenter.org/publications/url.cfm?ID=412495](http://www.taxpolicycenter.org/publications/url.cfm?ID=412495); Hang Nguyen and others, *How Hard Is It to Cut Tax Preferences to Pay for Lower Tax Rates?* (Urban-Brookings Tax Policy Center, July 10, 2012), [www.taxpolicycenter.org/publications/url.cfm?ID=412608](http://www.taxpolicycenter.org/publications/url.cfm?ID=412608); James Poterba and Todd Sinai, "Tax Expenditures for Owner-Occupied Housing: Deductions for Property Taxes and Mortgage Interest and the Exclusion of Imputed Rental Income," *American Economic Review*, vol. 98, no. 2 (May 2008), pp. 84–89, <http://dx.doi.org/10.1257/aer.98.2.84>; and Joseph J. Cordes, "Re-Thinking the Deduction for Charitable Contributions: Evaluating the Effects of Deficit-Reduction Proposals," *National Tax Journal*, vol. 64, no. 4 (December 2011), pp. 1001–1024, <http://ntj.tax.org>.

**Figure 2.****Shares of Selected Major Tax Expenditures, by Income Group, 2013**

(Percent)



Source: Congressional Budget Office.

Notes: Quintiles, or fifths, are created by ranking households by their before-tax income. Quintiles contain equal numbers of people.

The selected major tax expenditures are the exclusion of employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums; the exclusion of net pension contributions and earnings; the exclusion of capital gains on assets transferred at death; the exclusion of a portion of Social Security and Railroad Retirement benefits; the deduction for mortgage interest on owner-occupied residences; the deduction of nonbusiness state and local government income, sales, real estate, and personal property taxes; the deduction for charitable contributions; reduced rates on dividends and long-term capital gains; the earned income tax credit; and the child tax credit.

The expenditures for the exclusion of employers' contributions for health care, health insurance premiums, and long-term care insurance premiums and for the exclusion of net pension contributions and earnings include the effect on payroll taxes. The expenditures for the earned income tax credit and the child tax credit include the effect on outlays.

Because estimates of tax expenditures are based on people's behavior with the tax expenditures in place, the estimates do not reflect the amount of revenue that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

**Distribution as a Share of Income**

Household income is also unevenly distributed, even after accounting for the progressive effects of transfers and federal taxes.<sup>13</sup> When tax expenditures are measured as a share of after-tax, after-transfer income (hereafter

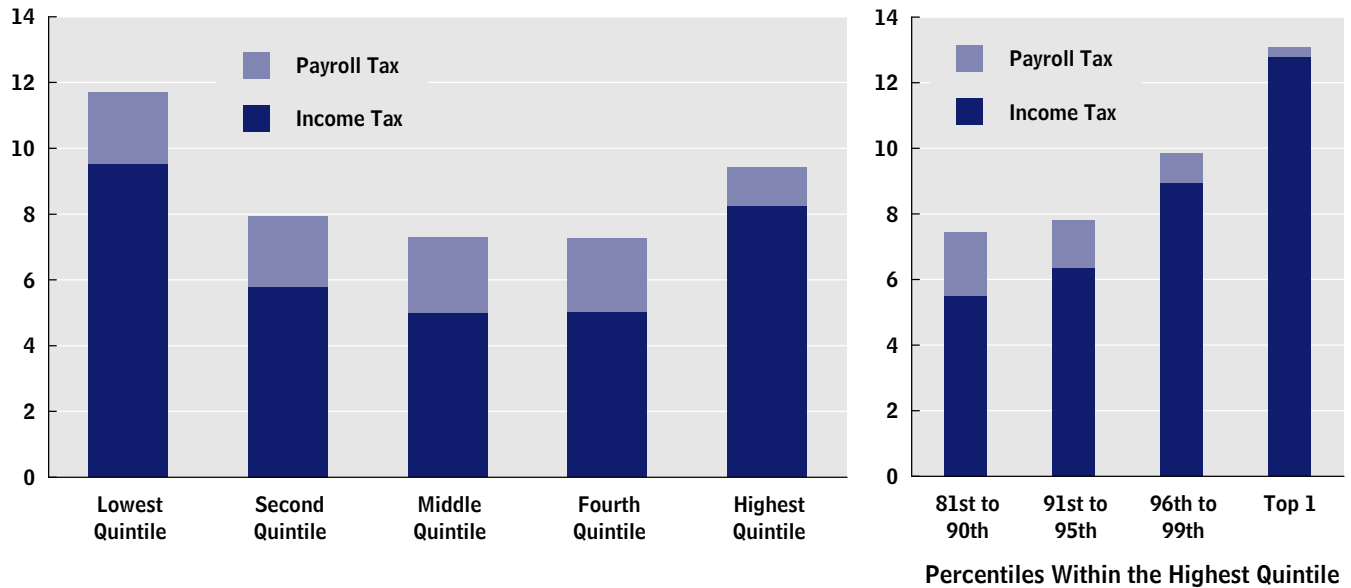
called "after-tax income"), they benefit households in the lowest and highest income groups by more than households in the middle of the income distribution. For 2013, CBO estimates that the 10 tax expenditures analyzed in this report will equal 11.7 percent of after-tax income for households in the bottom quintile, 9.4 percent of after-tax income for households in the highest quintile, and between 7 percent and 8 percent of after-tax income for households in the middle three quintiles (see Figure 3). Within the top quintile, tax expenditures rise as a share of after-tax income. For 2013, CBO estimates, tax expenditures will be 7.4 percent of income for households in the 81st to 90th percentiles (a similar rate to that of the middle three quintiles), 9.9 percent of income for households in the 96th to 99th percentiles, and 13.1 percent of income for households in the top percentile.

13. CBO estimates that in 2009, the last year for which the agency estimated the distribution of income and taxes, households in the lowest income quintile received 5 percent of before-tax income, households in the middle quintile received 15 percent, and households in the highest quintile received 51 percent. Because average federal tax rates rise with income, however, after-tax, after-transfer income is more evenly distributed than before-tax income. In 2009, households in the lowest income quintile received 6 percent of after-tax income, households in the middle quintile received 16 percent, and households in the highest quintile received 47 percent. See Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2008 and 2009* (July 2012), [www.cbo.gov/publication/43373](http://www.cbo.gov/publication/43373).

**Figure 3.**

### Selected Major Tax Expenditures as a Share of Income, by Income Group and Subgroups, 2013

(Percentage of after-tax income)



Source: Congressional Budget Office.

Notes: Income categories are created by ranking all households by their before-tax income. Percentiles (hundredths) and quintiles (fifths) contain equal numbers of people.

The selected major tax expenditures are the exclusion of employers’ contributions for health care, health insurance premiums, and long-term-care insurance premiums; the exclusion of net pension contributions and earnings; the exclusion of capital gains on assets transferred at death; the exclusion of a portion of Social Security and Railroad Retirement benefits; the deduction for mortgage interest on owner-occupied residences; the deduction of nonbusiness state and local government income, sales, real estate, and personal property taxes; the deduction for charitable contributions; reduced rates on dividends and long-term capital gains; the earned income tax credit; and the child tax credit.

The expenditures for the exclusion of employers’ contributions for health care, health insurance premiums, and long-term-care insurance premiums and for the exclusion of net pension contributions and earnings include the effect on payroll taxes. The expenditures for the earned income tax credit and the child tax credit include the effect on outlays.

Because estimates of tax expenditures are based on people’s behavior with the tax expenditures in place, the estimates do not reflect the amount of revenue that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

#### Distribution Excluding Payroll Taxes

The forgone payroll tax revenues from tax expenditures are roughly flat as a share of after-tax income in the bottom four quintiles of the income distribution, but they are a smaller share of income in the highest quintile and a much smaller share in the top 5 percent of the income distribution. Thus, the benefits of tax expenditures rise more sharply with income when only income taxes—rather than both income and payroll taxes—are considered. Still, tax expenditures from the individual income tax alone provide the greatest benefit as a share of after-tax income to households in the lowest and highest

income quintiles, consistent with the results reported here for tax expenditures from income and payroll taxes together.

#### The Distribution of Selected Individual Tax Expenditures

The overall distribution of tax expenditures masks significant variation in the distribution of various categories of those expenditures (see Figure 4).

- *Exclusions.* The benefits of exclusions from taxable income are roughly evenly distributed among

quintiles, ranging from 4.2 percent to 5.2 percent of after-tax income in 2013, according to CBO's estimates; the middle and fourth quintiles will receive slightly larger benefits than households at either end of the distribution.

- *Deductions.* The benefits of itemized deductions rise sharply with income in 2013, ranging from less than 0.1 percent of after-tax income for households in the lowest quintile to 0.4 percent for households in the middle quintile to 2.5 percent for households in the highest income quintile, CBO estimates.
- *Preferential Tax Rates.* The preferential tax rates on dividends and capital gains provide almost no benefits to households in the bottom four quintiles but provide notable benefits to households in the top quintile—amounting to 1.7 percent of after-tax income in 2013, according to CBO's estimates.
- *Tax Credits.* The largest tax credits are distributed very differently than the other categories of tax expenditures. The credits provide very large benefits to households in the lowest income quintile (8.1 percent of after-tax income in 2013, by CBO's estimate) and decreasing benefits to households in higher quintiles (amounting to 1.5 percent of income in the middle quintile and just 0.1 percent in the highest quintile).

Relative to income, deductions and preferential rates generally provide larger benefits to higher-income taxpayers than to other taxpayers, whereas tax credits generally provide bigger benefits to lower-income households. Exclusions from taxable income tend to be distributed roughly evenly across most income groups.

### Exclusions

Of the 10 major tax expenditures that CBO examined, four are exclusions of certain types of income from taxation:

- Employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums for their employees;
- Contributions to and earnings of pension funds (minus pension benefits included in taxable income);
- Capital gains from assets transferred at death; and

- A portion of Social Security and Railroad Retirement benefits.

CBO estimates that those four exclusions, taken together, will reduce tax liabilities by roughly \$480 billion, or about 4.9 percent of total after-tax income, in 2013.

Because the exclusions for employer-sponsored health insurance and pension contributions also reduce the base for payroll taxes, CBO calculated the effects of those provisions on both payroll taxes and individual income taxes. That approach differs from the way in which JCT and the Treasury estimate tax expenditures; estimates from those agencies generally include only the effects on income taxes. Not counting the effects on payroll taxes, CBO estimates that the four exclusions considered here will reduce tax liabilities by more than \$300 billion, or about 3.2 percent of after-tax income, in 2013.

Payroll taxes are a much flatter share of income across the income distribution than income taxes are, so excluding payroll taxes would make the distribution of those tax expenditures more tilted toward the top of the income scale. This report considers only the tax effects of the selected tax expenditures that affect payroll taxes. However, provisions that reduce the payroll tax base also reduce future Social Security benefits. Because those future benefits tend to be distributed more progressively than current payroll taxes (benefits are a larger percentage of lifetime earnings for workers with lower lifetime earnings), an analysis that incorporated those exclusions' effects on future Social Security benefits as well as on payroll and income taxes would probably show net benefits to be more skewed toward higher-income taxpayers than this analysis, which considers only the effects on taxes.

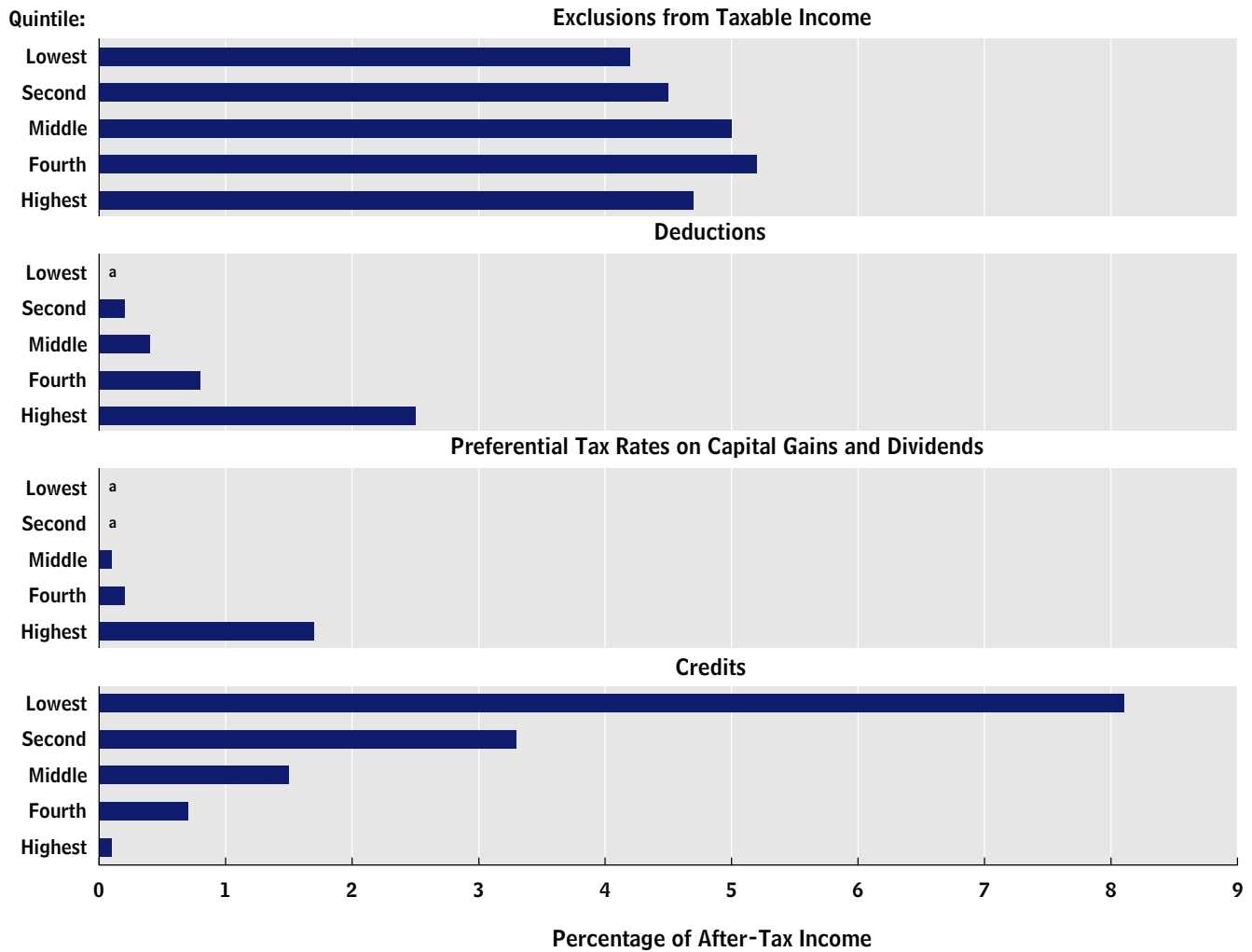
**Employer-Sponsored Health Insurance.** The exclusion of employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums for their employees is the single largest tax expenditure in the individual income tax code; it is estimated to reduce tax liabilities by \$260 billion (or \$140 billion excluding the effects on payroll taxes) in 2013 (see Figure 5).<sup>14</sup> CBO estimates that 34 percent of that expenditure will accrue

14. CBO's estimate of the individual income tax portion of the total tax expenditure for calendar year 2013 is consistent with the estimate of that figure from JCT for fiscal years 2013 and 2014.



**Figure 4.**

**Selected Major Tax Expenditures as a Share of Income, by Income Group and Type of Expenditure, 2013**



Source: Congressional Budget Office.

Notes: Quintiles, or fifths, are created by ranking households by their before-tax income. Quintiles contain equal numbers of people.

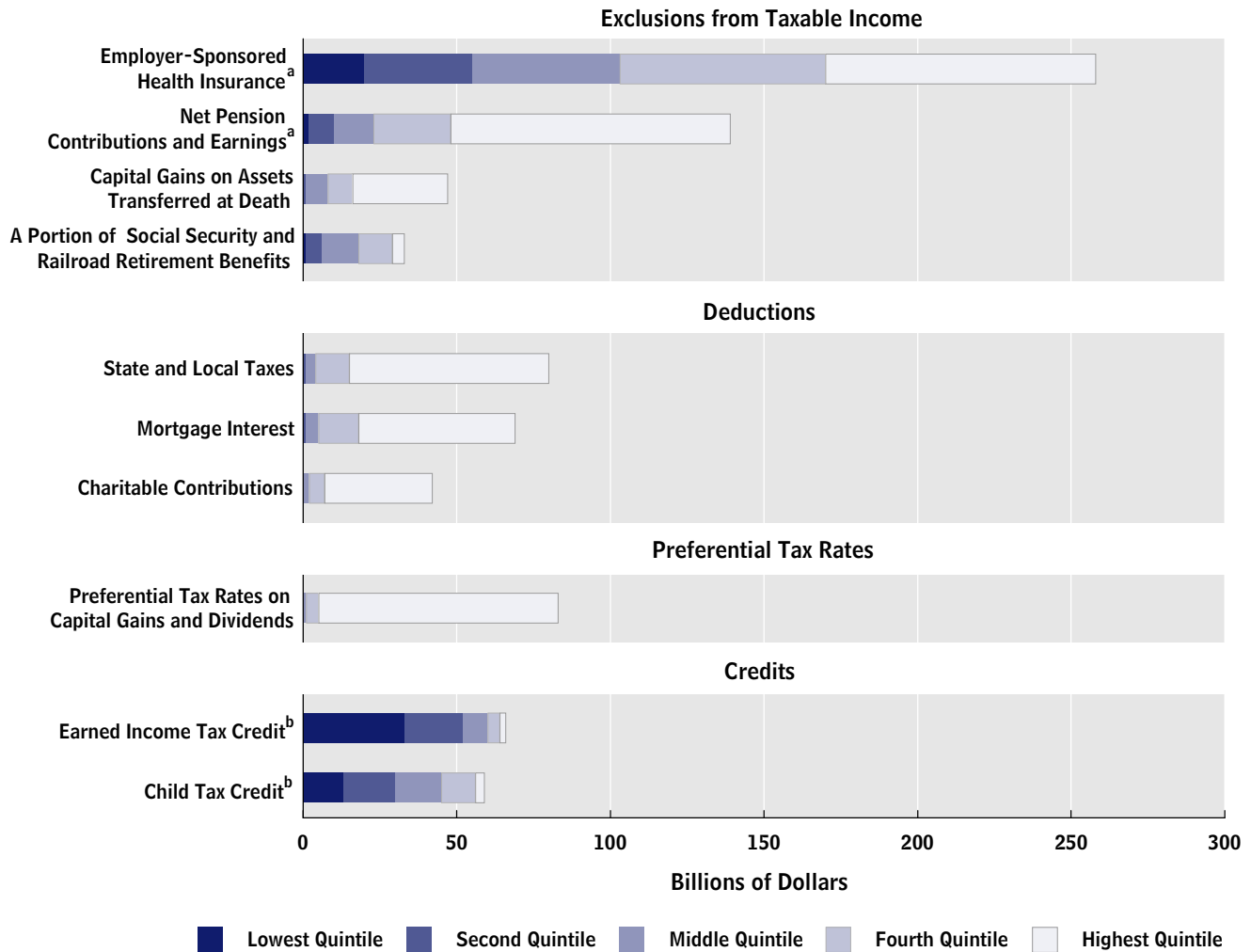
The selected major tax expenditures are the exclusion of employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums; the exclusion of net pension contributions and earnings; the exclusion of capital gains on assets transferred at death; the exclusion of a portion of Social Security and Railroad Retirement benefits; the deduction for mortgage interest on owner-occupied residences; the deduction of nonbusiness state and local government income, sales, real estate, and personal property taxes; the deduction for charitable contributions; reduced rates on dividends and long-term capital gains; the earned income tax credit; and the child tax credit.

The expenditures for the exclusion of employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums and for the exclusion of net pension contributions and earnings include the effect on payroll taxes. The expenditures for the earned income tax credit and the child tax credit include the effect on outlays.

Because estimates of tax expenditures are based on people's behavior with the tax expenditures in place, the estimates do not reflect the amount of revenue that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

a. Between zero and 0.05 percent.

**Figure 5.**  
**Size and Distribution of Selected Major Tax Expenditures, by Income Group, 2013**



Source: Congressional Budget Office.

Notes: Quintiles, or fifths, are created by ranking households by their before-tax income. Quintiles contain equal numbers of people.

Because estimates of tax expenditures are based on people’s behavior with the tax expenditures in place, the estimates do not reflect the amount of revenue that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

The exclusion from taxable income of employer-sponsored health insurance includes employers’ contributions for health care, health insurance premiums, and long-term-care insurance premiums.

a. Includes effect on payroll taxes.

b. Includes effect on outlays.

to the top quintile of the income distribution, 26 percent to the fourth quintile, 19 percent to the middle quintile, and 22 percent to the bottom two quintiles combined (see Table 2). Measured as a share of after-tax income, the ESI exclusion is fairly flat across the bottom four quintiles, ranging from 3.1 percent to 3.5 percent of income.

Taxpayers in the highest quintile will receive smaller benefits relative to income, equal to 1.9 percent of income, and those in the top percentile will receive benefits equal to only 0.5 percent of income. (Excluding the effects on payroll taxes, CBO estimates that the exclusion is less progressive, with benefits of 1.3 percent to 1.4 percent of

**Table 2.****Distribution of Selected Major Tax Expenditures, by Income Group, 2013**

(Percent)

Tax Expenditure	Lowest Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Highest Quintile	All Quintiles	Percentiles Within the Highest Quintile			
							81st- 90th	91st- 95th	96th- 99th	Top 1
<b>Share of Each Tax Expenditure</b>										
Exclusions from Taxable Income										
Employer-sponsored health insurance <sup>a</sup>	8	14	19	26	34	100	16	9	8	2
Net pension contributions and earnings <sup>a</sup>	2	5	9	18	66	100	17	13	22	14
Capital gains on assets transferred at death	*	3	15	17	65	100	10	6	28	21
A portion of Social Security and Railroad Retirement benefits	3	15	36	33	13	100	8	3	2	1
All Exclusions (Including interactions)	5	10	16	23	45	100	15	9	14	7
Deductions										
State and local taxes	*	1	4	14	80	100	17	15	19	30
Mortgage interest	*	2	6	18	73	100	19	16	23	15
Charitable contributions	*	1	4	11	84	100	13	12	21	38
All Deductions (Including interactions)	*	1	4	13	81	100	15	14	22	30
Preferential Tax Rates on Capital Gains and Dividends	*	*	2	5	93	100	5	5	14	68
Credits										
Earned income tax credit <sup>b</sup>	51	29	12	6	3	100	2	*	*	*
Child tax credit <sup>b</sup>	22	29	26	18	4	100	3	1	*	*
All Credits (Including interactions)	37	29	19	12	3	100	3	1	*	*
<b>All Expenditures (Including interactions)</b>	<b>8</b>	<b>10</b>	<b>13</b>	<b>18</b>	<b>51</b>	<b>100</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>17</b>
<b>Tax Expenditure as a Share of After-Tax Income</b>										
Exclusions from Taxable Income										
Employer-sponsored health insurance <sup>a</sup>	3.5	3.2	3.1	3.1	1.9	2.6	2.8	2.4	1.7	0.5
Net pension contributions and earnings <sup>a</sup>	0.4	0.7	0.8	1.2	2.0	1.4	1.6	2.0	2.7	1.7
Capital gains on assets transferred at death	**	0.1	0.5	0.4	0.7	0.5	0.3	0.3	1.2	0.9
A portion of Social Security and Railroad Retirement benefits	0.2	0.5	0.8	0.5	0.1	0.3	0.2	0.1	0.1	**
All Exclusions (Including interactions)	4.2	4.5	5.0	5.2	4.7	4.9	5.0	4.8	5.7	3.2
Deductions										
State and local taxes	**	0.1	0.2	0.5	1.4	0.8	0.9	1.3	1.3	2.2
Mortgage interest	**	0.1	0.3	0.6	1.1	0.7	0.9	1.2	1.4	0.9
Charitable contributions	**	**	0.1	0.2	0.7	0.4	0.4	0.5	0.7	1.4
All Deductions (Including interactions)	**	0.2	0.4	0.8	2.5	1.4	1.5	2.1	2.7	3.9
Preferential Tax Rates on Capital Gains and Dividends	**	**	0.1	0.2	1.7	0.9	0.3	0.5	1.0	5.3
Credits										
Earned income tax credit <sup>b</sup>	5.8	1.7	0.5	0.2	**	0.7	0.1	**	**	**
Child tax credit <sup>b</sup>	2.3	1.5	0.9	0.5	0.1	0.6	0.1	**	**	**
All Credits (Including interactions)	8.1	3.3	1.5	0.7	0.1	1.3	0.2	0.1	**	**
<b>All Expenditures (Including interactions)</b>	<b>11.7</b>	<b>7.9</b>	<b>7.3</b>	<b>7.3</b>	<b>9.4</b>	<b>8.7</b>	<b>7.4</b>	<b>7.8</b>	<b>9.9</b>	<b>13.1</b>

Source: Congressional Budget Office.

Notes: Income categories are created by ranking all households by their before-tax income. Percentiles (hundredths) and quintiles (fifths) contain equal numbers of people. The exclusion from taxable income of employer-sponsored health insurance includes employers' contributions for health care, health insurance premiums, and long-term-care insurance premiums.

\* = between zero and 0.5 percent; \*\* = between zero and 0.05 percent.

a. Includes effect on payroll taxes.

b. Includes effect on outlays.

after-tax income for the bottom three quintiles, 1.6 percent for the fourth quintile, and 1.3 percent for the highest quintile.)

Several factors explain that distributional pattern. First, the likelihood of having employer-sponsored insurance increases with income. Because average health insurance premiums do not rise as much as income rises, however, the distribution of ESI premiums is less tilted than the distribution of income. Second, the combined income and payroll tax rate on employer-sponsored health insurance rises somewhat across the income distribution, and the tax savings from each dollar excluded increases along with the tax rate. Those factors combine to produce a distribution for the tax expenditure that is fairly flat relative to after-tax income across most of the income scale.

**Net Pension Contributions and Earnings.** The exclusion of net pension contributions and earnings is another of the largest tax expenditures, estimated to total roughly \$140 billion in 2013 (or \$90 billion excluding the effects on payroll taxes). The tax expenditure is defined as the difference between the current treatment of pension contributions and income and the treatment under a pure individual income tax in which contributions were made with after-tax income, investment earnings inside pension accounts were taxed like ordinary investment earnings, and pension distributions were tax-free. Compared with that hypothetical tax, the current tax expenditure can be thought of as having three distinct components. First, contributions to pension plans are excluded from taxation when they are made. (All contributions from employers are exempt from income and payroll taxes, and most contributions from employees are exempt from income tax.) Second, the investment earnings on balances held inside pension accounts—the largest component of the tax expenditure—are untaxed. Finally, pension benefits are taxed upon withdrawal; that component partially offsets the first two components. (For a discussion of an alternative approach to estimating this tax expenditure—under which the current and future taxes paid for retirement contributions made today are compared with the current and future taxes that would have been paid on an equivalent investment in a taxable account—see the appendix.)

The tax expenditure for the exclusion of net pension contributions and earnings tilts heavily toward the top of the income distribution, with the top quintile receiving two-thirds of the tax expenditure. CBO estimates that,

in 2013, households in the bottom quintile will receive benefits from this tax expenditure equal to 0.4 percent of after-tax income, households in the middle quintile will receive benefits equal to 0.8 percent of income, and households in the top quintile will receive benefits equal to 2.0 percent of income. Life-cycle earnings patterns explain some of that distribution, because households in their peak earnings years are most likely to have accumulated large balances in pension plans. Higher-income households also face higher marginal tax rates (the tax rate that would apply to an additional dollar of a taxpayer's income) and are more likely to be covered by pensions. In addition, the generosity of pension plans rises somewhat with income, although that effect is limited by caps on contributions and antidiscrimination rules, which prevent employers from making pension plans significantly more valuable for highly compensated employees than for other employees. (Not counting the effects on payroll taxes, the exclusion is less progressive, CBO estimates, with the bottom quintile receiving benefits equal to 0.2 percent of after-tax income; the middle quintile, 0.4 percent; and the top quintile, 1.5 percent. The highest-income households have a relatively smaller reduction in their benefit when payroll taxes are excluded because those households tend to pay a smaller share of their income in payroll taxes.)

**Capital Gains on Assets Transferred at Death.** The exclusion of capital gains on assets transferred at death is a smaller tax expenditure—estimated to be about \$50 billion in 2013—than the previous two exclusions. It also tilts toward the top of the income distribution: CBO estimates that 65 percent of the tax benefit accrues to the top quintile (with 21 percent going to the top 1 percent of households), and an additional 17 percent accrues to the fourth quintile. The exclusion of capital gains at death largely benefits households with high net worth, and such households tend to be in the upper portion of the income distribution.<sup>15</sup>

**A Portion of Social Security and Railroad Retirement Benefits.** The exclusion of a portion of Social Security and Railroad Retirement benefits generates a tax expenditure that is estimated to be about \$35 billion in 2013. The exclusion almost exclusively benefits middle-income taxpayers, CBO estimates, with 84 percent flowing to households in the middle three income quintiles. Higher-income taxpayers benefit little from the exclusion because they are required to include most of their Social Security benefits in their taxable income under current law.

Lower-income households also benefit little from the exclusion because the personal exemption and standard deduction already exclude from taxation a large portion of those benefits.

### Deductions

Three of the 10 major tax expenditures that CBO examined allow people who itemize deductions to subtract from their taxable income their spending for certain items:

- State and local taxes (on income, sales, real estate, and personal property),
- Mortgage interest on owner-occupied residences, and
- Charitable contributions.

CBO estimates that those deductions, taken together and including interactions among them, will reduce tax liabilities by roughly \$140 billion in 2013. Eliminating those deductions would raise federal revenues by significantly less than that tax expenditure because people would modify their behavior in response. Moreover, eliminating all three of those deductions would raise revenues by less than the sum of the effects of eliminating each deduction, because if all of the deductions were gone, more taxpayers would claim the standard deduction (instead of itemizing deductions) than would be the case if any single deduction was repealed.<sup>16</sup>

Itemized deductions provide the largest benefits—in both absolute dollars and relative to income—to the highest-income taxpayers. Those tax expenditures benefit only the roughly one-third of taxpayers who itemize their

deductions, and lower-income taxpayers are much less likely than higher-income taxpayers to do so. Additionally, the value of deductions rises as taxpayers move into higher tax brackets: A taxpayer in the 15 percent tax bracket who itemizes deductions saves \$150 in taxes by making a \$1,000 charitable contribution, but the same contribution reduces the tax bill of a taxpayer in the 39.6 percent tax bracket by \$396. CBO estimates that the tax benefit of those three deductions in 2013 will equal less than 0.1 percent of after-tax income for the lowest income quintile, 0.4 percent for the middle quintile, 2.5 percent for the highest quintile, and 3.9 percent for the top percentile (see Table 2 on page 15).

**State and Local Taxes.** The state and local tax deduction—estimated at about \$80 billion in 2013—is the biggest of the three deductions that CBO examined. It provides a much larger benefit relative to income for higher-income households than for lower-income households. For 2013, CBO estimates that this deduction will account for less than 0.1 percent of after-tax income for households in the lowest income quintile, 0.2 percent for those in the middle quintile, and 1.4 percent for those in the highest quintile.

### Mortgage Interest on Owner-Occupied Residences.

The deduction for interest paid on mortgages for owner-occupied residences, which CBO estimates will equal \$70 billion in 2013, is the next-largest itemized deduction. It is also the least tilted toward the top of the income distribution, in part because the law caps the maximum mortgage amount on which interest payments can be deducted (generally limited to the first \$1 million of mortgage debt) and in part because mortgage debt rises less rapidly with income than do other deductible expenses. Nonetheless, the tax expenditure still benefits

15. The ultimate incidence of this tax expenditure is uncertain. The exclusion could narrowly benefit either decedents or their heirs, or the exclusion could have much broader effects on labor and capital income by affecting saving behavior, much like other taxes on capital income. CBO allocates the tax to decedents; it calculates the value of the tax expenditure by first estimating the tax that each household would owe if a member died and then multiplying that amount by each member's probability of death. Other researchers who have examined the distribution of the estate tax have found that the distribution is highly progressive regardless of whether the burdens are allocated to decedents or to heirs. For example, see Lily L. Batchelder and Surachai Khitatrakun, "Dead or Alive: An Investigation of the Incidence of Estate and Inheritance Taxes" (paper presented at the Third Annual Conference on Empirical Legal Studies, Ithaca, N.Y., September 12–13, 2008), <http://dx.doi.org/10.2139/ssrn.1134113>.

16. The limit on itemized deductions, which was reinstated in 2013, contributes to that interaction among deductions. The limit reduces allowable itemized deductions for taxpayers with adjusted gross income (AGI) above \$250,000 (\$300,000 for joint filers) by 3 percent of the excess of AGI over that threshold, up to a maximum reduction equal to 80 percent of itemized deductions. Because the limit depends on the amount of income above the threshold, it is unaffected by the amount of deductions, except for the small number of taxpayers with deductions low enough to trigger the 80 percent limit. Repealing any one of the three itemized deductions analyzed here would have little effect on the limit, because most high-income people would still have enough deductions that the 80 percent limit would not be triggered; however, repealing all three of those deductions would trigger the 80 percent limit for many more taxpayers.

higher-income households much more than other households. CBO estimates that the top quintile will receive almost three-quarters of the benefit of the deduction in 2013, including 15 percent accruing to the top percentile. The mortgage interest deduction will equal less than 0.1 percent of after-tax income for households in the lowest income quintile, 0.3 percent for those in the middle quintile, and 1.1 percent for those in the highest quintile, CBO estimates.

The tax expenditure for the mortgage interest deduction varies over time with the rate of home ownership and interest rates. CBO expects that interest paid on owner-occupied housing will be about 25 percent lower in 2013 than it was in 2006, the year before housing prices began to decline. Had mortgage interest payments held steady at the 2006 share of households' income, the size of this tax expenditure would be roughly 50 percent larger in 2013 than the current estimate.

**Charitable Contributions.** The deduction for charitable contributions will equal about \$40 billion in 2013, CBO estimates. Higher-income households tend to contribute a greater share of their income to charity and to receive a larger subsidy per dollar contributed. Consequently, the benefits of this tax expenditure are concentrated among those households, with the top quintile receiving more than 80 percent of the tax expenditure, including 38 percent for the top percentile. CBO estimates that, in 2013, the tax expenditure will equal just 0.1 percent of after-tax income for households in the middle quintile, 0.7 percent for those in the highest quintile, and 1.4 percent for the top percentile.

### Preferential Tax Rates

Some forms of income are subject to preferential tax rates under the income tax. In particular, long-term capital gains and dividends are taxed at lower rates than are other forms of income. (Although lower tax rates on investment income are considered tax expenditures relative to a pure income tax, investment income generally would be excluded from taxation under a consumption tax; thus, those lower rates would not be viewed as a tax expenditure relative to that benchmark.) Currently, long-term capital gains and dividends are subject to a 20 percent maximum tax rate for taxpayers subject to the top (39.6 percent) marginal tax bracket on ordinary income, a 15 percent maximum rate for taxpayers in the 25 percent through 35 percent tax brackets, and a rate of zero

for taxpayers in the 10 percent and 15 percent marginal tax brackets.

Beginning in 2013, taxpayers with income over certain thresholds—\$200,000 for single filers and \$250,000 for joint filers—will face a surtax equal to 3.8 percent of their investment income (including capital gains and dividend income as well as interest income and some passive business income). That surtax, enacted as part of the Affordable Care Act, effectively reduces the preferential rate on dividends and capital gains. JCT treats the surtax as a negative tax expenditure—that is, a deviation from the reference tax system that increases rather than decreases taxes. CBO's estimates of the preferential rates do not include the effect of the surtax. In CBO's estimation, the surtax on all income subject to the tax, not just capital gains and dividends, will raise revenues by roughly \$17 billion in 2013. The surtax overwhelmingly affects high-income taxpayers, with 91 percent of the surtax falling on the top percentile of the income distribution and the rest on the 96th through 99th percentiles.

The tax expenditure from the preferential rates on long-term capital gains and dividends will be roughly \$85 billion in 2013, CBO estimates. That estimate is based on current amounts of dividends paid out by corporations and capital gains realized by individuals. If the preferential rates on those forms of income were eliminated, corporations would alter the amounts of dividends they paid and individuals would alter the amount of capital gains they realized, so the increase in tax revenues would be smaller than \$85 billion. In anticipation of the higher tax rates that were scheduled to take effect in 2013, individuals and corporations probably shifted back into 2012 a significant amount of capital gains realizations and dividends that otherwise would have been realized or paid in 2013. CBO estimates that such shifting reduced the size of the tax expenditure in 2013 (measured as calendar-year tax liabilities) by roughly 20 percent.<sup>17</sup>

Virtually all of the benefits from the preferential tax rates on those sources of income accrue to the top quintile of households. The tax expenditure for that group will equal 1.7 percent of their after-tax income in 2013, CBO

17. That shifting makes the fiscal year 2013 tax expenditure much larger than the calendar year 2013 tax expenditure, because taxes on most gains realized in calendar year 2012 are paid in fiscal year 2013.

**Box 1.****Health Insurance Exchange Subsidies**

The Affordable Care Act provides subsidies to help low- and moderate-income people purchase health insurance through new health insurance exchanges, which are scheduled to begin operating in 2014. Individuals and families who have income between 100 percent and 400 percent of the federal poverty guidelines, who do not have access to affordable employment-based health insurance, who are not eligible for Medicaid or the Children's Health Insurance Program, and who meet certain other requirements may receive a premium assistance tax credit to cover some of the cost of a health insurance plan purchased through an exchange. That subsidy program is designed so that eligible people with relatively low income will receive greater benefits than those with higher income. The credit will equal the difference between a reference premium amount and a specified percentage of income, initially ranging from 2.0 percent (for people with income below 133 percent of the federal poverty guidelines) to 9.5 percent (for people with income between 300 percent and 400 percent of the federal poverty guidelines).<sup>1</sup>

The Congressional Budget Office (CBO) and the staff of the Joint Committee on Taxation (JCT) project that the tax expenditure for premium assistance credits will be 0.2 percent of gross domestic product, or GDP (\$41 billion), in fiscal year 2015. Participation in the exchanges is expected to ramp up quickly over the following years, bringing the expenditure up to 0.5 percent of GDP (\$93 billion) in 2017. CBO and JCT expect it to remain around 0.5 percent of GDP from 2018 through 2023.

Because the distributional analysis in this report evaluates tax expenditures only in calendar year 2013, it does not consider the tax expenditure for exchange subsidies. Analysis of subsequent years, when the exchange subsidies were in effect, would show those subsidies accruing mainly to households in the bottom two-thirds of the income distribution. However, because many of the lowest-income taxpayers will be eligible for Medicaid, they will not benefit from the tax expenditure.

1. For more information, see Congressional Budget Office, *Additional Information About CBO's Baseline Projections of Federal Subsidies for Health Insurance Provided Through Exchanges* (May 2011), [www.cbo.gov/publication/41464](http://www.cbo.gov/publication/41464).

estimates (see Table 2 on page 15). Within the top quintile, the tax expenditure is heavily concentrated in the top 1 percent of households, because a large share of investment income in the form of capital gains realizations and dividends accrues to those taxpayers. The top 1 percent of households will receive more than two-thirds of the total value of the benefit in 2013, CBO estimates, which will equal 5.3 percent of their after-tax income.

**Tax Credits**

The other major tax expenditures included in this analysis are two tax credits, both generally targeted toward households with children. CBO projects that tax expenditures for the earned income tax credit and the child tax credit will be about \$60 billion each in 2013.<sup>18</sup> Both credits were significantly expanded in 2001 and again in later years, but the expansions enacted since 2008 are

scheduled to expire at the end of December 2017; thus, under current law, the impact of those two credits will decline modestly in the future.

Credits for participating in health insurance exchanges are not included in the distributional analysis because they are not in effect in 2013. Those credits are expected to be substantial in subsequent years, however (see Box 1).

CBO estimates that, taken together, the benefits of the two credits in 2013 will equal 8.1 percent of after-tax

18. The estimates for the earned income tax credit and child tax credit include the refundable portions of the credits (the amounts in excess of income tax liability), which are recorded as outlays in the federal budget.

income for households in the lowest income quintile, 1.5 percent for those in the middle quintile, and just 0.1 percent for those in the highest quintile (see Table 2 on page 15). Several features of the credits lead to that distributional pattern. First, both credits have a fixed maximum value, making them a smaller share of income as income rises (in contrast to exclusions or deductions, which are uncapped and can rise with income). Second, both credits phase out to zero as income rises beyond certain thresholds, making higher-income taxpayers ineligible for the credits.<sup>19</sup> Finally, both credits are refundable, so taxpayers need not owe income taxes in order to claim the credits; that refundability allows the lowest-income households to benefit from the credits. Because the child tax credit phases out at higher income thresholds than the earned income tax credit and because its refundability is more limited, the child tax credit is less concentrated at the bottom of the income distribution.

The earned income tax credit is much larger for families with children than for childless workers, and the child tax credit is only available to families with children, so estimates of the distribution of the credits depend critically on the distribution of families with children across the

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19. Despite income restrictions, households in the top two quintiles of the income distribution may receive the credits in certain cases, because households may include multiple families or tax filers. For example, a household may include a family consisting of one low-income parent and two children that is eligible for the earned income and child tax credits and a higher-income adult whose income places the entire household at the top of the income distribution.

income scale. When ranking the population by income, CBO adjusts household income for family size; as a result, more families with children are included in the bottom income quintile.<sup>20</sup> Without such an adjustment, the tax credits would appear less progressive than they do in this report.

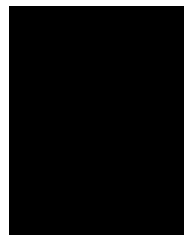
**Earned Income Tax Credit.** In 2013, more than half of the earned income tax credit will accrue to households in the bottom quintile of the income distribution, CBO estimates; for those households, the credit will equal 5.8 percent of their after-tax income. An additional 29 percent of the credit will accrue to households in the second quintile, for whom the credit will equal 1.7 percent of their after-tax income (see Table 2 on page 15). In contrast, the top two quintiles of households will receive just 9 percent of the benefits from the earned income tax credit, and as a consequence, the credit has a very small effect relative to their after-tax income.

**Child Tax Credit.** The child tax credit is concentrated in the middle of the income distribution, with households in the second and third quintiles receiving the largest shares. CBO estimates that, in 2013, the credit will be 2.3 percent of after-tax income for households in the lowest income quintile, 0.9 percent for those in the middle quintile, and 0.1 percent for those in the highest quintile.

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20. For an explanation of CBO's adjustment for household size, see Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2008 and 2009* (July 2012), [www.cbo.gov/publication/43373](http://www.cbo.gov/publication/43373).





## Appendix: Additional Features of the Estimates

**S**ix aspects of the estimates of tax expenditures presented in this report merit further discussion. First, the Congressional Budget Office's (CBO's) estimation approach incorporates the assumption that, in the absence of a single tax expenditure, taxpayers would make use of other tax provisions that might generate tax expenditures. Second, the estimates do not represent the amount of revenue that would be raised if the associated tax provisions were eliminated, because they do not account for the behavior of taxpayers. Third, tax expenditures may affect people other than those who claim them (and have different effects on people who claim the same amounts); however, CBO allocates the dollar amounts claimed to the people who claim them. Fourth, the estimates in this report include interactions among the tax expenditures that CBO considered. Fifth, CBO's analysis of payroll taxes does not include effects on future Social Security benefits related to payroll taxes paid. Sixth, the tax expenditure for net pension contributions and earnings differs from the other tax expenditures considered in this report because it arises from a significant alteration in the timing of tax payments.

### Estimation Approach

To evaluate the distribution of tax expenditures, CBO used a sample of income tax returns filed in 2006 (the most recent public-use data with detailed tax return information that was available at the time of the analysis) and extrapolated those returns to 2013 to account for actual and projected changes in income and demographics. CBO calculated a broad measure of before-tax income, including both market income (such as labor income, business income, and capital income) and government transfer payments (such as Social Security benefits).<sup>1</sup>

In this analysis, CBO presents results for various subgroups of the population, such as the lowest quintile

or the top 1 percent. In constructing those subgroups, households (all people living in a single housing unit) are ranked by income that is adjusted for household size, to reflect the fact that larger households need more income than smaller households to achieve the same economic status. CBO adjusted for household size by dividing household income by an adjustment factor equal to the square root of the number of people in the household, counting adults and children equally. That adjustment implies that each additional person increases a household's needs but at a decreasing rate. Table A-1 presents the range of income for households of different sizes in each category of before-tax income that CBO uses in the study.

CBO then simulated what tax liabilities would have been for each taxpayer in 2013 in the absence of the provisions generating tax expenditures but not accounting for any change in taxpayers' behavior in response to eliminating those provisions. Each estimated tax expenditure for each taxpayer was scaled so that the sum of estimates across taxpayers for a given tax expenditure matched the aggregate amount of that tax expenditure as estimated by the staff of the Joint Committee on Taxation (JCT).

In this report, CBO follows JCT's approach and measures each tax expenditure "by the difference between tax liability under present law and the tax liability that would result from a recomputation of tax without benefit of the tax expenditure provision."<sup>2</sup> Taxpayers are assumed to take advantage of any of the remaining tax expenditure

1. For information about how CBO estimates the distribution of taxes and household income, see Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2008 and 2009* (July 2012), [www.cbo.gov/publication/43373](http://www.cbo.gov/publication/43373).
2. See Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2012–2017*, JCS-1-13 (February 1, 2013), p. 23, [www.jct.gov/publications.html?func=fileinfo&id=4503](http://www.jct.gov/publications.html?func=fileinfo&id=4503).

**Table A-1.****Minimum Income for Different Income Groups, by Household Size, 2013**

(Dollars)

	Lowest Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Highest Quintile	Percentiles Within the Highest Quintile			
						81st to 90th	91st to 95th	96th to 99th	Top 1
One-Person Household	0	24,700	38,500	55,100	81,400	81,400	110,500	148,200	327,000
Two-Person Household	0	35,000	54,400	77,900	115,100	115,100	156,200	209,500	462,500
Four-Person Household	0	49,500	77,000	110,200	162,800	162,800	220,900	296,300	654,000

Source: Congressional Budget Office.

Notes: Income categories are created by ranking all households by their before-tax income. Percentiles (hundredths) and quintiles (fifths) contain equal numbers of people.

Income amounts have been rounded to the nearest \$100.

provisions that apply to the income or the expenses associated with the tax expenditure in question. For example, the tax expenditure for the exclusion of employer-sponsored health insurance is estimated as the difference in tax liability if the exclusion was repealed but taxpayers were still allowed to claim the next-best tax treatment available under current law for health insurance contributions; for some taxpayers, that next-best treatment would be to claim those contributions as an itemized medical deduction.

## Differences Between Tax Expenditures and Revenue Estimates

Estimates of tax expenditures are intended to mirror budget totals for traditional government spending programs, which represent spending amounts given current law and behavior. Estimates of tax expenditures do not equal the additional revenues that would be raised if tax provisions were repealed, just as CBO's projections of spending for different programs under current law do not equal the reduction in spending that would occur if those programs were eliminated. For example, the reduction in spending that would result from the elimination of one program (such as Disability Insurance) could be offset somewhat by increased spending for other programs (such as Supplemental Security Income, which provides cash assistance to people with low income and few assets who are also disabled). Although that offset would be included in a CBO estimate of the budgetary effect of repealing a program, it is not reflected in budget projections for that program.

The change in incentives that would result from repealing a particular tax provision that generates a tax expenditure would lead taxpayers to modify their behavior in ways that would generally make the revenue impact of the repeal smaller than the tax expenditure. For example, if the preferential tax rates on capital gains were eliminated, taxpayers would reduce the amount of capital gains they realized. Because that tax expenditure is projected on the basis of the gains that are expected to be realized with the preferential rates in place, the amount of additional revenues that would be received if those preferences were eliminated would be smaller than the estimated tax expenditure.

## Incidence of Tax Expenditures

The economic incidence of a tax is the change in the distribution of individual welfare that results from the tax. Behavioral responses can affect the incidence of tax expenditures, but those responses and the resulting changes in incidence are not reflected in this report.

Taxpayers in different income groups may be more or less able to adjust their behavior in response to provisions of law, and even households not directly affected by tax expenditures might be affected by their existence. For example, the estimated tax expenditure for the deduction of mortgage interest does not incorporate any adjustments by taxpayers in the amount of mortgage debt they hold or any impact on housing values. However, affluent taxpayers with other significant assets might hold more mortgage debt than they would

otherwise because mortgage interest receives preferential tax treatment. Furthermore, the value of the deduction is probably built into housing prices, so even homeowners who do not hold mortgage debt or currently claim the deduction for mortgage interest may benefit from the deduction.<sup>3</sup> However, the estimates in this report attribute the benefit from that tax expenditure to taxpayers entirely on the basis of the mortgage interest deduction they claim.

## Interactions Among Provisions

Estimated tax expenditures in this report include the interactions that would arise if multiple tax expenditures were set aside at the same time. For instance, eliminating a particular income tax exclusion would increase taxable income, pushing some income into tax brackets with higher marginal rates. Eliminating *all* income exclusions would increase taxable income by the sum of the individual increases (leaving aside other considerations); but because of the structure of tax brackets and marginal rates, a larger share of that additional income would end up in tax brackets facing higher marginal rates. As a result, the budgetary effect of eliminating all exclusions would be larger than the sum of the effects of eliminating each exclusion separately. Conversely, eliminating all itemized deductions would have a smaller effect than the sum of the estimates for eliminating each deduction, because with all of the deductions gone, more taxpayers would claim the standard deduction (instead of itemizing deductions) than would be the case if any single deduction was repealed.

For the entire group of tax expenditures examined here, such interactions would largely offset one another, subtracting less than 2 percent from the total size of the expenditures, CBO estimates. However, interactions among certain subsets of provisions may be substantial.

## Effects of Including Payroll Taxes

The exclusions for employer-sponsored health insurance and net pension contributions and earnings not only reduce income subject to the income tax but also reduce

earnings subject to the payroll taxes for Social Security (Old-Age, Survivors, and Disability Insurance, or OASDI), and Medicare's Hospital Insurance (HI) program. The estimates in this report of the exclusions for employer-sponsored health insurance and pension contributions include that effect on payroll taxes. In contrast, estimates of tax expenditures published by JCT and the Treasury generally include only the effects on income taxes.<sup>4</sup>

Exclusions from payroll taxes also generally reduce future OASDI benefits, which are determined by a person's lifetime earnings subject to Social Security taxes. The exclusions are unlikely to have much effect on future HI benefits, because all workers meeting the eligibility requirements for the HI program are eligible for the same benefits. An ideal measure of the effect of the exclusions on Social Security payroll taxes might subtract the present value (a single number that expresses a flow of current and future payments in terms of a lump sum paid today) of the expected incremental benefits from the amount of the tax in the current year, but CBO's estimates do not include any effects on future benefits. Including those effects would mute the budgetary cost of the exclusions.

Researchers who have studied the implicit marginal tax rate on earnings—taxes paid minus the present value of benefits—in the Social Security system find that the rate varies considerably depending on a worker's circumstances.<sup>5</sup> Some workers' implicit marginal tax rate equals the statutory OASDI rate, because they pay tax but

3. For a discussion of the potential behavioral effects associated with repeal of the mortgage interest deduction, see Adam J. Cole, Geoffrey Gee, and Nicholas Turner, "The Distributional and Revenue Consequences of Reforming the Mortgage Interest Deduction," *National Tax Journal*, vol. 64, no. 4 (December 2011), pp. 977–1000, <http://ntj.tax.org>.

4. JCT has previously estimated the effect on payroll taxes of the provision that excludes employers' contributions for health insurance premiums from workers' taxable income. See Joint Committee on Taxation, *Background Materials for Senate Committee on Finance Roundtable on Health Care Financing*, JCX-27-09 (May 8, 2009), [www.jct.gov/publications.html?func=fileinfo&id=3557](http://www.jct.gov/publications.html?func=fileinfo&id=3557). The Treasury provides estimates of the effect on payroll taxes of the exclusion of employers' contributions for health insurance in a footnote to Table 17-1 in Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2013: Analytical Perspectives* (February 2012), Chapter 17, [www.gpo.gov/fdsys/search/pagedetails.action?granuleId=&packageId=BUDGET-2013-PER](http://www.gpo.gov/fdsys/search/pagedetails.action?granuleId=&packageId=BUDGET-2013-PER).

5. See Gopi Shah Goda, John B. Shoven, and Sita N. Slavov, "Removing the Disincentives in Social Security for Long Careers," in Jeff Brown, Jeff Liebman, and David A. Wise, eds., *Social Security Policy in a Changing Environment* (University of Chicago Press, 2009), pp. 21–38, [www.nber.org/books/brow08-1](http://www.nber.org/books/brow08-1); and Martin Feldstein and Andrew Samwick, "Social Security Rules and Marginal Tax Rates," *National Tax Journal*, vol. 45, no. 1 (March 1992), pp. 1–22, <http://ntj.tax.org>.

receive no additional benefits from additional earnings. But other workers face a much lower, or even negative, marginal tax rate on their additional earnings (a negative marginal rate implies that the present value of benefits accruing from additional earnings exceeds the Social Security payroll taxes paid on those earnings). Importantly, because the Social Security system replaces a larger share of earnings for low-earning workers than for high-earning workers, high-earning workers face a higher implicit tax rate from Social Security than do low-earning workers. Thus, a full accounting of payroll taxes and Social Security benefits would probably make the distribution of the exclusions for employer-sponsored health insurance and net pension contributions appear more progressive than the current analysis, which examines only the tax effects. However, because other factors besides earnings are important for future Social Security benefits—age, sex, career length, and marital status also affect the implicit tax rate—the effects of the exclusions on future benefits are difficult to estimate.

### An Alternative Method for Valuing Pensions

Pension contributions are excluded from income and payroll taxes when they are made, and investment earnings in pension plans are not taxed under the income tax. Income taxes are not avoided altogether (although the payroll taxes on contributions are); instead, they are deferred until funds are distributed from retirement plans. The traditional approach to estimating this tax expenditure, used in this report, measures the effect of all current and past pension contributions on current tax revenues. An alternative approach is to measure the effect of current contributions on current and future taxes.

Using the traditional approach, CBO estimated the tax expenditure for pension contributions as the difference between the current tax treatment and an alternative in which there was no deduction for contributions, investment earnings in existing accounts were taxed, and withdrawals from existing accounts were not taxed. Thus, the tax expenditure has three distinct components: the taxes forgone on current contributions, the taxes forgone on investment earnings of past contributions, and the taxes collected on pension benefits (which partially offset the first two components).

Under an alternative approach, the current and future taxes paid for retirement contributions made today are compared with the current and future taxes that would have been paid on an equivalent investment in a taxable account. Because the tax benefits from current pension contributions occur over many years, the tax benefit of the exclusion is best measured as a present value.<sup>6</sup> That approach calculates the entire future stream of tax payments for an investment in a pension account (in general, contributions to retirement accounts and investment earnings are not taxed but withdrawals are) and the stream of tax payments for an investment in a taxable account (in which contributions and investment earnings are taxed but withdrawals are not). Those two payment streams are then converted into 2013 dollars, and the tax expenditure is valued as the difference. Calculating the present value of tax savings for current retirement contributions requires making many assumptions, however. The value is especially sensitive to assumptions about the rate of return on investment earnings and the tax rate that would apply to those earnings.<sup>7</sup>

In CBO's estimation, the tax expenditure for net pension contributions and earnings measured as the present value of one year's retirement contributions would be roughly 10 percent lower than the tax expenditure measured in the traditional way (as presented in this report). The present-value measure of the tax expenditure would also be slightly more progressive than the traditional measure. Households in the bottom three income quintiles would receive 18 percent of the tax expenditure

6. The Treasury also provides present-value estimates for tax expenditures related to deferrals of income, including expenditures for retirement savings and accelerated depreciation of property. See Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2013: Analytical Perspectives* (February 2012), Chapter 17, Table 17-4, [www.whitehouse.gov/sites/default/files/omb/budget/fy2013/assets/spec.pdf](http://www.whitehouse.gov/sites/default/files/omb/budget/fy2013/assets/spec.pdf).

7. CBO's calculations incorporate the following assumptions: Pension contributions remain in tax-preferred plans until taxpayers reach age 65, at which point those contributions are withdrawn in equal installments until taxpayers reach age 85; investments earn a 5 percent before-tax rate of return, of which one-quarter is interest and the remainder is evenly split between dividends and capital gains; capital gains taxes are deferred, with an average holding period of seven years, and are taxed at a preferential rate; future taxes are discounted using a 5 percent discount rate; and each taxpayer would face the same marginal tax rate in retirement as he or she faces today.

under the present-value method, compared with 16 percent under the traditional method. The fourth quintile would receive 24 percent of the benefits under the present-value method, compared with 18 percent under the traditional method, and the top income quintile would receive 58 percent under the present-value method, versus 66 percent under the traditional method. Another important difference between the two methods involves distribution by age: Under the present-value method, younger workers benefit more, and older workers benefit less, than they would under the traditional method.

Using the present-value method to measure current retirement contributions would have little effect on the overall distribution of the tax expenditures studied here, because pensions are less than one-fifth of total tax expenditures and because the distribution of the pension tax expenditure under the present-value and traditional methods does not differ greatly. Under the present-value method, the share of total tax expenditures received by the highest income quintile would fall by about 1 percentage point, and the share received by the four lowest quintiles would increase slightly.

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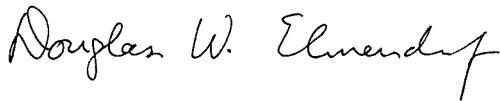
## About This Document

**T**his Congressional Budget Office (CBO) report was prepared at the request of the Ranking Member of the House Committee on the Budget. In keeping with CBO's mandate to provide objective, impartial analysis, the report makes no recommendations.

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Director

May 2013