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## **DISTRIBUTIONAL EFFECTS OF TAX EXPENDITURES**

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## Introduction

The Congressional Budget Act of 1974 defines tax expenditures as “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 liability.” The Office of Management and Budget (OMB) and the Joint Committee on Taxation (JCT) annually report estimates of tax expenditures.<sup>1</sup> The term “tax expenditure” was popularized by Stanley Surrey, Assistant Treasury Secretary for Tax Policy in the 1960s, who wanted to draw attention to the increasing use of tax provisions as disguised expenditures and develop an agenda for tax reform.

By any measure, the revenue losses from tax expenditures are large. Adding up all the tax expenditure estimates in the 2010 Federal Budget, we calculate a sum of about \$1.1 trillion in fiscal year 2012, or about 6.7 percent of projected gross domestic product (GDP). Of these, about \$900 billion (5.8 percent) of GDP go to support social program activities (housing; education, training, and social services; health; income security, including retirement security; veterans benefits; assistance to economically depressed regions; and aid to charities and states and localities). OMB and JCT estimate each tax expenditure provision as if all the others were in place, so simply adding them together does not take account of how eliminating some tax expenditures would affect the costs of others. Totaling all the provisions may understate their cost, however. Burman, Toder, and Geissler (2008), using the Tax Policy Center Simulation Model (Rohaly, Carasso, and Saleem, 2005), find that interactions raised the total cost of a large subset of tax expenditures in the individual income tax estimated simultaneously by between 5.1 and 8.4 percent in 2007, compared with the sum of the costs of the separate estimates.<sup>2</sup>

Tax expenditures have widely varying effects on the distribution of income. Refundable credits in the current income tax (the Earned Income Tax Credit and Child Tax Credit) raise after-tax incomes the most for low-income taxpayers. Preferential rates for dividends and capital gains, in contrast, raise after-tax incomes the most for the highest-income taxpayers, who receive much larger shares of their incomes from these sources than others. Exclusions and deductions raise after-tax incomes more for taxpayers in the top fifth of the income distribution than for others, but provide proportionately smaller gains at the very top of the distribution. Overall, tax expenditures in the individual income tax raise after-tax incomes more for higher income than lower-income taxpayers (Burman, Toder, and Geissler, 2008). If one assumes that capital owners receive a large share of the benefits of business tax preferences, then the distribution of all tax expenditures is even more tilted toward high-income people.

This paper examines the distributional effects of three of the largest groups of tax expenditures – those that subsidize owner-occupied housing, medical care, and retirement

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<sup>1</sup> The OMB estimates are prepared by the Office of Tax Analysis of the U.S. Treasury Department. The JCT also reports the distribution of benefits by income class of selected individual income tax expenditures. See Joint Committee on Taxation (2008).

<sup>2</sup> The higher figure assumed the AMT patch had not been enacted and 23 million taxpayers were subject to the AMT, while the lower figure assumed the AMT had been repealed. The paper cited explains the paradoxical result that the AMT raises both the interaction effect and the total cost of tax expenditures.

saving. In the aggregate, the provisions we examine are estimated to cost about 47 percent of all tax expenditures (3 percent of GDP). They form a significant part of the U.S. social welfare state, which relies heavily on tax incentives to promote owner-occupied housing, health insurance coverage for working families, and retirement saving for middle-income families. The next section of the paper discusses issues in measuring and interpreting distributional estimates of tax expenditures, emphasizing in particular that estimated distributional effects depend on assumptions (often unstated) about how the revenue would have been spent absent the tax incentives. We then provide estimates of the effects on after-tax income of different income groups of the principal tax incentives for housing, health care, and retirement saving and estimates of the *net effects* on after-tax income, assuming three alternative ways of spending the revenue cost of these incentives. These alternatives include reducing tax rates by the same percentage of income for all taxpayers, reducing tax rates by the same percentage for all taxpayers, and providing a uniform refundable credit. Finally, we discuss how the estimated effects of tax expenditures provided through the workplace are sensitive to assumptions about how tax incentives affect the wage bargain.

### **Issues in Measuring Distributional Effects**

Measuring the distributional effects of tax expenditures is not straightforward and there is no one right answer to the question of who benefits from tax expenditures. This section discusses five key issues analysts must confront in deciding how to assign the distribution of tax expenditures to different groups: (1) determining the baseline against which to measure tax expenditures, (2) adjusting for the effects of provisions that alter the timing of tax liability across years, (3) taking account of potential behavioral responses when tax laws change, (4) determining the incidence—that is how prices adjust when tax laws change, and (5) determining how the extra revenue from eliminating the tax expenditure would be used.

#### *Defining the Baseline*

Tax expenditures are defined as special “exceptions” to a “normal” or “reference” income tax. Not all provisions that reduce revenue are counted as tax expenditures. For example, deductions for the cost of earning income (including costs incurred by businesses and employee business expenses) are not tax expenditures because these costs must be subtracted in calculating the resources available to the taxpayer for consumption or increases in wealth. Personal exemptions, the standard deduction, and the benefit of tax rates below the top marginal rate are not considered tax expenditures, but instead are counted as part of a “normal” tax structure that allows for a graduated tax rate schedule, including a zero bracket, and permits varying ways of defining the tax unit (e.g., single or married filing jointly) and adjusting for family size.

This raises the question of what should be counted in the baseline tax system against which some provisions are defined as “exceptions.” The normal income tax baseline that Stanley Surrey and his colleagues developed was modeled on a comprehensive income tax, but includes some exceptions. For example, for many years the exemption of imputed rental income on owner-occupied homes was not counted as a tax expenditure provision on the grounds that imputed rent would be too difficult to tax, even though the equity return on housing would be part of a comprehensive income tax that included in its

base all returns to capital investment. Recently, the Treasury Department added imputed rent to its list of tax expenditures (Office of Management and Budget 2009), but JCT still does not include it. Similarly, the normal tax base includes a separate corporate-level tax, although a comprehensive income tax would tax all capital income once and therefore would not tax equity returns to shareholders at both the corporate and individual level. When Congress cut the maximum dividend tax rate to 15 percent in 2003, the Joint Tax Committee counted the lower rate as a tax expenditure provision because shareholders pay less tax on their dividend income than creditors and employees pay on interest income and wages, but the Treasury Department did not count the lower dividend rate as a tax expenditure on the grounds that double taxation of corporate dividends is not part of a comprehensive income tax.

An especially controversial issue has been the treatment of saving. Many legal and economic tax specialists have come to regard a broad-base progressive consumption tax that exempts normal returns to saving as a superior normative base to an income tax (Zodrow 2007; Bankman and Weisbach 2007). The current treatment of savings in deductible qualified retirement plans is exactly how saving would be treated under a consumption tax. Income accrued within the account would be tax free and tax liability would be deferred until the money is withdrawn for consumption (Carroll, Mackie, and Joulfaian 2008). Most OECD countries allow such deferred tax treatment for retirement saving (Yoo and Serres 2004) and the availability of such treatment in the United States is so widespread that some might view it as a basic rule of the tax system instead of an exception. Under a consumption tax baseline, the saving credit would be the only current tax expenditure for retirement saving because it allows investors a higher yield than they would receive with no taxation of capital income.

In spite of all these qualifications, there are numerous provisions in the tax code that represent disguised spending under any reasonable definition and would not be part of any broadly based, normative tax system. Few analysts would dispute that provisions such as residential energy credits, tuition credits, the exclusion of employer-provided health insurance premiums, and the deductibility of non-business property taxes are exceptions to any broad-based income tax and substitute for spending or regulation as forms of government intervention.

While many have wrestled with the issue of what should be counted as a tax expenditure (Fiekowsky 1980; Shaviro 2004; Kleinbard 2008), it is not the purpose of this paper to resolve this controversy. The analysis below will use the conventional definition of tax expenditures as measured by OMB and JCT. Nonetheless, the reader should keep in mind that all the estimates are based on a somewhat arbitrary definition of a baseline tax system against which the provisions are exceptions.

#### *Cash Flow vs. Present Value*

Tax expenditures are measured as the revenue loss from a provision in a given year. But some provisions benefit selected taxpayers by changing the timing instead of the total amount of tax payments. For example, the bonus depreciation provision in the recent stimulus bill allows companies to deduct immediately 50 percent of qualified investment placed in service in 2009 instead of recovering the cost over time through depreciation. Total deductions over the life of the asset remain unchanged, but the accelerated

deduction effectively provides the taxpayer with an interest-free loan from the government in the form of deferred tax liability and reduces the user cost of the asset. Official tax expenditure lists show a large revenue loss in the year of investment, followed by revenue gains (negative tax expenditures) in subsequent years as businesses claim less depreciation than they otherwise would have. The correct measure of the incentive effect is the present value of tax saving over the life of an asset for any single year's investments. Office of Management and Budget (2009) provides a table showing the present value of selected tax expenditures for activity in calendar year 2008.

Timing issues arise also in the analysis of saving incentives. Deductible and Roth IRAs both effectively exempt the return on saving from tax, but deductible IRAs allow taxpayers to defer payment of tax on contributions until cash is withdrawn from the account, while Roth IRAs tax contributions and exempt withdrawals. Consequently, an expansion of deductible IRAs shows a much larger revenue loss (and cash flow tax expenditure measure) than a Roth IRA, even though in the long run the Roth IRA may cost just as much or even more. In this paper, we provide both cash flow and present value estimates of the distributional effects of tax expenditures for retirement saving.

### *Behavioral Responses*

Tax expenditure estimates, unlike revenue estimates, assume no behavioral response. For example, if the capital gains tax were to be raised, revenue estimators would assume there is some decline in capital gains realizations (Congressional Budget Office 2002), making the net revenue pickup less than the revenue that would be gained if realizations were unchanged. In contrast, the tax expenditure estimate measures the difference between current law and an alternative normal tax baseline that was *always* in effect. For capital gains, the tax expenditure estimate measures the difference between current capital gains tax rates and taxing capital gains as ordinary income at the current level of realizations. Tax expenditures also do not take account of timing or transition rules; for example changes in a provision may apply only to new transactions.

Another example is the mortgage interest deduction. Eliminating the deduction would provide some taxpayers with an incentive to sell off assets and pay down their mortgage, because other assets would generate taxable income not offset by interest deductions. If taxpayers optimally rearrange their portfolios, revenue gains from eliminating the mortgage interest deduction would be less than the static revenue gain (Follain and Melamed 1998) and the distribution of gains would differ from the static distribution. Older and wealthier taxpayers would be most able to escape the burden of the additional tax, while younger homeowners without other assets would have less ability to lower their mortgage debt, so that net benefits from the mortgage interest deduction would be smaller at the very top of the income distribution than in the static estimates. Still, Gale, Gruber, and Stephens-Davidowitz (2007) estimate that the revenue gain from eliminating the mortgage interest deduction would fall by at most only 16 percent if taxpayers reduced their other taxable capital income (by selling assets and paying off debt) in response to the loss in interest deductibility.

## *Tax Incidence*

Analysts who prepare distributional tables typically assume that changes in the burden of individual income taxes are borne by taxpayers in proportion to their change in tax liability (Congressional Budget Office 2007; Cronin 1999).<sup>3</sup> Assigning the burden of individual income taxes to individual taxpayers is reasonable if labor supply and saving are relatively unresponsive to changes in after-tax wages and returns to capital, respectively, so that individuals cannot shift the burden of income taxes to others. In effect, it is assumed that changes in individual income tax provisions do not change pre-tax wages and returns to saving, so that individual taxpayers bear the entire burden or benefit in changes in after-tax income. However, for targeted tax expenditures affecting a particular economic activity or sector, the assumption that market prices do not change is less plausible. If, for example, a tax subsidy for a particular activity causes its market price to fall, the taxpayer receiving the direct tax benefit may share her gain with a buyer paying a lower price for a good or service.

For example, consider the effects of eliminating the interest exemption on state and local bonds. Individual taxpayers holding these bonds would pay more income tax and standard distributional tables would assign the burden of this tax change to the income groups that typically hold these bonds. But with the exemption removed, state and local bonds would lose their advantage over taxable bonds, causing the interest rates to rise. The change in interest rates would increase returns to future bondholders and raise borrowing costs to states and localities, so that over time a portion of the burden of the tax increase would be shifted from high-income investors to beneficiaries of state and local borrowing. Another example is the deduction for charitable contributions. If the deduction were removed, taxes paid by donors would rise. But, if in addition, donors give less to charity in response to the increased price of giving, they would recover some of the loss in private consumption from the higher taxes they pay and shift some of the burden of the tax change to beneficiaries of charitable organizations.

A more complex incidence issue has to do with how the distributional tables treat taxation of employee fringe benefits that must be provided on a uniform basis to all or to any given group of employees. Typically, it is assumed that fringe benefits substitute for cash wages on a dollar for dollar basis, so that if tax changes induced employers to reduce these benefits, they would increase cash wages for each worker by 100 percent of her loss in fringe benefits. If, however, fringe benefits cause employers to change the distribution of pretax compensation among workers, the distributional effects of the tax benefit may be misstated. We discuss this issue and the bias it may cause to the estimates after presenting the basic distributional estimates of tax expenditures for health and retirement saving.

### *How Would the Revenue Be Used?*

Eliminating or paring back tax expenditures would raise substantial amounts of revenue. Their ultimate effect on the distribution of after-tax income depends on what the government would do with this increased revenue. Burman, Toder, and Geissler (2008), for example, estimate that tax expenditures in the individual income tax increase after-tax

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<sup>3</sup> Some exceptions are made when liability changes are due to certain behavioral responses or reflect changes in the timing of tax payments.

income more for high-income than for lower income tax units. But they also show that, if elimination of the tax expenditures were financed by an across-the-board equal percentage cut in marginal tax rates, high income tax units would be net *winners* and low-income tax units would be net *losers*.<sup>4</sup>

The last time Congress substantially cut tax expenditures was in the Tax Reform Act of 1986 (TRA86). Among other provisions, TRA86 eliminated preferential tax rates for long-term capital gains, closed off tax shelters by reducing accelerated depreciation for housing and other assets and limiting deductions for passive losses, and eliminated the investment tax credit. Overall, the tax expenditures reduced or eliminated by TRA86 substantially favored upper-income taxpayers. But TRA86 also reduced marginal tax rates the most at the top of the distribution, cutting the top individual rate from 50 to 28 percent and the top corporate rate from 46 to 34 percent, making its overall effect on the distribution of the tax burden roughly neutral or only slightly progressive (Kasten, Sammartino, and Toder, 1994). Congress appeared to be aiming to maintain the prior distribution of the tax burden, even as it was slashing preferences used by high-income individuals and corporations. If Congress in future reforms continues to target effective progressivity<sup>5</sup> instead of maintaining the current statutory rate structure when tax preferences are pared back, eliminating tax expenditures may have little or no effect on income distribution.

We don't presume to know how the system would adjust if tax expenditures were eliminated, so we simulate three possible ways of spending the increased revenue: 1) cutting marginal tax rates across the board by equal percentage points, 2) cutting marginal tax rates across the board by the same percent, and 3) providing a uniform refundable credit for each adult in a tax unit and 50 percent of that credit amount for each dependent child. The net distributional effects vary greatly depending on how the revenue is spent. (The appendix displays the distributional effects of the three offsets we simulate.)

### *Methodology*

In summary, we make the following assumptions in the simulations that follow:

*Use OMB and JCT tax expenditure definitions.* We use the OMB and JCT income tax baselines and tax expenditure definitions for measuring tax expenditures for housing, medical care, and retirement saving. We do, however, use a different baseline tax law than OMB (2010) uses in its latest tax expenditure presentation. OMB estimates tax expenditures for the years 2010-2014 against a current law baseline in which the Bush 2001 and 2003 tax cuts expire on schedule at the end of 2010 and the temporary increase in exemptions under the individual alternative minimum tax (AMT) lapses as scheduled at the end of 2009. We estimate tax expenditures in 2010 assuming a "current policy" baseline in which all the Bush tax cuts are extended, except the estate tax which is kept at 2009 parameters, and the higher AMT exemptions in effect through 2009 are extended and indexed to inflation. Our current policy baseline is the same baseline that the Obama

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<sup>4</sup> For a related discussion of how financing assumptions change the distributional effects of a tax cut, see Elmendorf et. al (2008).

<sup>5</sup> See President's Advisory Panel on Federal Tax Reform (2005).

Administration uses in its overall budgetary presentation and its estimates of the effects of its tax proposals, though not for the tax expenditure computations.

*No behavioral response.* We assume taxpayers do not change their behavior in response to tax expenditures for housing, health and retirement saving. Homeowners do not change their housing consumption or pay off their mortgages. Medical expenses are unchanged and employers continue either to provide the same health care coverage or replace each worker's imputed insurance benefits with an equal amount of cash wages. Saving rates and portfolio choices of investors are unchanged.

*Cash flow revenue effects (with alternative for savings estimates).* We provide cash flow revenue estimates of the distributional effects of tax expenditures for housing, medical care, and retirement saving. In addition, we estimate the effects of eliminating tax expenditures only for *new* contributions to retirement savings accounts. For these estimates, we measure the value of the tax expenditure to individual taxpayers as the present value of the difference in after-tax income over a lifetime between investing their (current law) contribution amount in a qualified retirement saving account and investing the same contribution outside a qualified account.<sup>6</sup>

*Individuals bear the burden of individual income taxes in proportion to the change in their tax liability.* We assume no shifting of tax burdens. Pre-tax earnings and market prices of different consumption goods are assumed to be unaffected by tax law changes.

*Employees pay for fringe benefits they receive in lower wages.* We assume that if the tax-exemption for fringe benefits were removed, employers would either continue to supply the same benefits (now taxable) or would replace the benefits with an equal amount of taxable cash wages for each affected worker.

*Alternative assumptions about how revenue would be used.* We assume the additional revenue is returned to taxpayers either as (1) an equal percentage point cut in marginal tax rates (i.e., a constant percentage of income), (2) an equal percentage cut in marginal tax rates (i.e., a constant percentage of taxes paid), or (3) a fixed dollar refundable credit for each adult in a tax unit plus another 50 percent of the credit amount for each dependent child.

## **Distributional Effects of Tax Expenditures for Owner-Occupied Housing**

The 2010 Federal Budget lists five permanent tax expenditures for owner-occupied housing.<sup>7</sup> These provisions (and their 2012 estimated revenue losses) are: deductibility of mortgage interest on owner-occupied homes (\$131.2 billion), capital gains exclusion on home sales (\$49.6 billion), deductibility of state and local property taxes on owner-occupied homes (30.6 billion), exclusion of net imputed rent (\$3.7 billion), and exclusion of interest on owner-occupied mortgage subsidy bonds (\$1.1 billion). The revenue loss

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<sup>6</sup>This is consistent with the methodology used by the Treasury's Office of Tax Analysis and the Tax Policy Center. See Cronin (1999) and Burman et al. (2004).

<sup>7</sup> There are also two temporary tax expenditure provisions—forgiveness of tax on discharge of mortgage indebtedness and a credit for first-time homebuyers. The credit provision—at the time it was scored by JCT—was effectively a zero interest loan that needed to be repaid in subsequent years (although the repayment provision has since been dropped). OMB therefore reported negative tax expenditure amounts for 2010-2014 because home buyers were expected to be repaying credits claimed in 2008 and 2009.

from deductibility of state and local property taxes is lower than it might have been because state and local taxes are not deductible under the individual AMT and the AMT patch expires after 2009, putting many more taxpayers on the AMT. OMB estimates that the state and local property tax deduction costs about 32.9 percent as much as the mortgage interest deduction in fiscal year 2008, when the AMT patch and Bush tax cuts were in effect. If that ratio had been maintained in 2012, the property tax deduction would have cost \$43.2 billion.

### *Provisions Estimated*

In this paper, we estimate the distributional effects of two of the three largest tax expenditures – those for deductibility of mortgage interest and state and local property taxes. Under current law, homeowners may deduct mortgage interest and property taxes on their homes even though the homes generate no taxable income. (The exemption of net equity returns on homes is also counted as a tax expenditure item by OMB, although not by JCT.) These deductions provide a substantial subsidy to owner-occupied housing to taxpayers who itemize deductions. A number of analysts have argued, however, that these tax provisions do little to increase homeownership, but instead provide an incentive for middle and upper-income taxpayers to own bigger homes (Mann 2000; Gale, Gruber, and Stephens-Davidowitz 2007; Poterba and Sinai 2008).

We estimate the mortgage interest deduction will cost \$92.7 billion in fiscal year 2012 and the property deduction another \$39.8 billion, relative to the current policy baseline (table 1). The two deductions combined cost \$120.0 billion, less than the sum of adding them together (\$132.5 billion). The interaction effect of eliminating itemized deductions is negative (the total is less than the sum of the individual items) because eliminating one deduction causes more taxpayers to switch to the standard deduction, reducing the cost of the second deduction.

Table 1: Distributional Effects of Eliminating Home Mortgage and Property Tax Deductions

Cash Income Percentile	Percent Change in After Tax Income			Share of Total Tax Change		
	Mortgage Interest Deduction	Property Tax Deduction	Both Deductions Combined	Mortgage Interest Deduction	Property Tax Deduction	Both Deductions Combined
Lowest Quintile	0.0	0.0	0.0	0.1	0.1	0.1
Second Quintile	-0.1	-0.1	-0.2	1.4	1.2	1.3
Middle Quintile	-0.6	-0.2	-0.6	8.6	6.7	7.7
Fourth Quintile	-1.0	-0.4	-1.2	21.6	18.6	20.1
Top Quintile	-1.3	-0.6	-1.7	68.4	73.4	70.9
All	-1.0	-0.4	-1.2	100.0	100.0	100.0
<b>Top Quintile Breakdown</b>						
80-90th percentiles	-1.6	-0.6	-2.0	22.8	20.2	21.8
90-95th percentiles	-1.7	-0.8	-2.3	16.7	16.8	17.2
95-99th percentiles	-1.6	-0.8	-2.2	21.8	23.5	22.3
Top 1 percent	-0.4	-0.3	-0.8	7.2	12.9	9.6
Top 0.1 percent	-0.1	-0.2	-0.3	1.0	3.2	1.8
Memo: revenue effect (in billions of dollars)	92.7	39.8	120.0			

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0309-2). Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI.

*Effects on After-Tax Distribution of Income of Eliminating the Deductions*

Eliminating the itemized deductions for mortgage interest and residential property taxes would lower after-tax income by 1.2 percent for the whole population (table 1). Across quintiles of the income distribution, the loss as a share of after-tax income increases as income grows. People in the bottom three quintiles lose less than 1.2 percent of income, while the 4<sup>th</sup> quintile receives about the average loss and tax units in the top quintile lose more (1.7 percent). Higher-income taxpayers lose relatively more as a group because they are more likely to own homes and claim itemized deductions instead of the standard deduction and because deductions are worth more to taxpayers in higher marginal rate brackets.

Taxpayers between the 80<sup>th</sup> and 99<sup>th</sup> percentiles of the income distribution experience the largest losses as a share of income, but the relative loss falls off sharply at the very top of the distribution. Taxpayers in the top 1 percent see their after-tax income decline by only 0.8 percent, less than for the population as a whole. The relatively small losses at the very top reflect the fact that housing consumption (and the associated interest and tax costs) rises less than proportionately with income for the very rich.

Taxpayers in the top two quintiles receive almost all the benefit of these two deductions (right panels of table 1). The top quintile gains a slightly larger share of the total benefit from the property tax deduction than from the interest deduction because high-income households are more likely to have paid off their mortgage than others.

These taxpayers do, however, benefit from the exemption of imputed rental income (not shown here).

### *Effects of Using Alternative Offsets*

We estimate the effects of combining the elimination of the mortgage interest and property tax deductions with three revenue-neutral offsets – reducing all marginal tax rates by 1.8 percent of income (to a range of 8.2 to 33.2 percent from the current policy baseline rates of 10 to 35 percent), reducing all marginal tax rates by 8.9 percent (to a range of 9.1 to 31.9 percent), and providing a refundable tax credit to each tax unit equal to \$467 for each adult and \$233 for every dependent child under age 17.<sup>8</sup> Under this latter policy, a couple with two children would receive \$1,401.

Eliminating the deductions and lowering all marginal tax rates by 1.8 percent of income would raise after-tax income for the bottom four quintiles and reduce after-tax income for the top quintile (table 2). Within the top quintile, after-tax income would on average decline for taxpayers in the 80-99<sup>th</sup> percentiles of the income distribution, but increase for taxpayers in the top 1 percent. Measured this way, the mortgage interest and property tax deductions, if financed by a flat-rate tax on income, benefits taxpayers in the 80<sup>th</sup>-99<sup>th</sup> percentile of the income distribution and hurts everyone else.

Cash Income Percentile	Lower all tax rates by 1.8% of income			Lower all tax rates by 8.9%			\$467 per capita refundable credit		
	% change in after tax income	% with tax cut	% with tax increase	% change in after tax income	% with tax cut	% with tax increase	% change in after tax income	% with tax cut	% with tax increase
Lowest Quintile	0.1	19.5	1.6	0.1	19.3	1.7	5.5	99.8	0.2
Second Quintile	0.4	60.6	8.1	0.2	59.9	8.7	2.4	96.9	3.1
Middle Quintile	0.4	71.9	19.0	0.1	69.3	21.6	1.0	84.6	15.4
Fourth Quintile	0.2	66.1	32.2	-0.2	60.5	37.8	0.0	67.1	32.9
Top Quintile	-0.3	47.3	51.7	0.0	47.3	51.7	-1.2	31.5	68.4
All	0.0	51.3	19.3	0.0	49.6	21.0	0.0	80.2	19.8
Top Quintile Breakdown									
80-90th percentiles	-0.5	49.9	49.0	-0.6	46.3	52.5	-1.1	40.0	60.0
90-95th percentiles	-0.8	42.4	56.8	-0.7	41.7	57.5	-1.7	26.0	74.0
95-99th percentiles	-0.7	42.6	56.5	-0.3	49.8	49.4	-1.8	20.5	79.5
Top 1 percent	0.5	63.9	35.3	1.2	74.6	24.6	-0.7	17.1	82.9
Top 0.1 percent	0.8	76.2	22.9	1.6	81.0	18.0	-0.3	11.2	88.8

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0309-2). Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI.

Eliminating the deductions and lowering all marginal rates by 8.9 percent has similar effects as lowering marginal rates by 1.8 percent of income, except that the net benefits are larger for taxpayers in the top tenth of the income distribution and smaller for everyone else. On balance, substituting the lower rates for the deductions increases after-tax income in the bottom three quintiles and reduces after-tax income in the fourth quintile and between the 80<sup>th</sup> and 99<sup>th</sup> percentiles of the top quintile. The biggest winners are those at the very top of the income distribution, however, because these taxpayers get

<sup>8</sup> We use eligibility for the Child Tax Credit, which is currently whether a tax unit contains a child under age 17, to determine whether tax units qualify for the dependent credit in this scenario.

relatively little benefit (as a share of their income) from the deduction and benefit most from an across-the-board cut in marginal tax rates. Put another way, financing mortgage interest and property tax deductions by a proportional increase in marginal tax rates hurts those at the bottom of the distribution (who gain little from the deductions) and those at the very top (who lose the most from the higher taxes), but provides net benefits to middle and upper-income taxpayers below the top 1 percent.

In contrast, if the mortgage and property tax deductions were replaced with a flat rate refundable credit, lower-income taxpayers would benefit and all high-income groups would be worse off. The biggest losers on average would be those in the 90<sup>th</sup> to 99<sup>th</sup> percentiles of the income distribution and the biggest winners (as a share of after-tax income) would be those in the bottom quintile. The very richest taxpayers lose only modestly on balance; they lose relatively little as a share of income from the elimination of the deductions, but gain even less from the refundable credit. Put another way, financing the mortgage interest and property tax deductions with flat rate per capita benefit cuts hurts lower-income taxpayers the most while benefitting upper-income taxpayers, in particular those just below the top of the distribution.

### **Distributional Effects of Tax Expenditures for Medical Care Expenses**

The 2010 Federal Budget lists six permanent tax expenditures for health insurance and health care expenses for individuals. These provisions (and their 2012 estimated revenue losses) are: exclusion of employer contributions for medical insurance premium and medical care (\$184.9 billion)<sup>9</sup>, deduction of health insurance premiums for the self-employed (\$7.5 billion), tax preferences for medical savings accounts and health savings accounts (\$2.2 billion), deductibility of medical expenses (\$14.8 billion), a refundable tax credit for health insurance purchased by certain displaced and retired individuals (\$0.2 million)<sup>10</sup>, and exemption of distribution from retirement plans for premiums for health and long-term insurance for public safety officers (\$0.4 billion).

#### *Provisions Estimated*

We estimate the distributional effects of the three largest of these tax expenditures – the exclusion of employer-supplied insurance (ESI) premiums and medical care, the deduction for self-employed health plans, and the itemized deduction for medical expenses. We estimate that these provisions together will cost \$172.9 billion in 2012. The cost we estimate is lower than the OMB estimate because our estimate uses a current policy baseline, which assumes that the 2001 and 2003 Bush tax cuts are extended, while the OMB estimates are scored against a current law baseline, under which the tax cuts expire in 2011 and income in 2012 is therefore taxed at higher rates.

#### *Effects on After-Tax Distribution of Income*

Eliminating the major health tax expenditures would lower income the most for taxpayers in the three middle income quintiles and the bottom portion of the top quintile (table 3). Taxpayers in the lowest income quintile lose less than others because their insurance

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<sup>9</sup> This estimate includes only the loss of income tax revenues; OMB estimates a reduction of an additional \$104.7 in payroll tax revenues, some of which will be recouped by the government in lower Social Security retirement benefits.

<sup>10</sup> This figure includes the refundable portion of the credit, which is scored as an outlay.

coverage rates are relatively low, few taxpayers in that group itemize and therefore can use the medical deduction, and they would face low marginal tax rates on their extra taxable income from including employer health benefits in income or eliminating deductions for medical expenses. As income rises, marginal tax rates, the share with insurance coverage, and the share who itemize all increase (although the effect of itemization is limited because it does not affect whether one benefits from the ESI exclusion). At higher income levels, however, almost everyone is covered and the average insurance benefit increases only slightly as income increases. As a result, the loss in tax benefits as a share of total income from eliminating the preferences drops sharply in the top income groups.

**Table 3: Distributional Effects of Eliminating Exclusion for Employer-Provided Health Insurance, Self-Employed Health Insurance Deduction, And Itemized Deduction for Medical Expenses (Income Tax Effects Only), Tax Year 2012**

Cash Income Percentile	Percent Change in After-Tax Income	Share of Total Tax Change
Lowest Quintile	-0.7	1.8
Second Quintile	-2.1	11.1
Middle Quintile	-2.3	18.8
Fourth Quintile	-2.3	26.4
Top Quintile	-1.5	41.9
All	-1.8	100.0
Top Quintile Breakdown		
80-90th percentiles	-2.6	19.7
90-95th percentiles	-1.9	10.0
95-99th percentiles	-1.4	9.8
Top 1 percent	-0.3	2.4
Top 0.1 percent	-0.1	0.3
Memo: Revenue Effect (in billions of dollars)		172.9

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0309-2)  
 Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI.

### *Effects Using Alternative Offsets*

We estimate the effects of combining elimination of exemption of ESI, deduction of health insurance premiums for the self-employed and the itemized deduction for medical expenses with three revenue neutral offsets – reducing all marginal tax rates by 2.48

percent of income (to a range of 7.52 to 32.52 percent from the current policy baseline rates of 10 to 35 percent), reducing all marginal tax rates by 12.5 percent (to a range of 8.75 to 30.63 percent), and providing a refundable tax credit to each tax unit equal to \$673 for each adult and \$337 for every dependent child under age 17. Under this latter policy, a couple with two children would receive \$2,019.

If the three health tax expenditures were eliminated and marginal tax rates were all lowered by 2.48 percent of income, after-tax income would decrease for the bottom four quintiles and for the bottom half of the top quintile and increase for the top 10 percent of the income distribution (table 4). The biggest losers would be those in the second and third quintiles of the distribution, who would not gain enough from the tax rate cuts to compensate for the loss of tax-free health benefits. The top 1 percent would be the biggest winners from eliminating the preferences. In other words, the health tax preferences help the bottom 90 percent of tax units and hurt the top 10 percent if paid for with a flat rate tax of 2.48 percent of income.

**Table 4: Distributional Effects of Eliminating Exclusion for Employer-Provided Health Insurance, Self-Employed Health Insurance Deduction, and Itemized Deduction for Medical Expenses with Revenue Neutral Tax Rebates (Income Tax Effects Only), Tax Year 2012**

Cash Income Percentile	Lower All Tax Rates by 2.48% of Income			Lower All Tax Rates by 12.5%			\$673 per capita refundable credit		
	% change in after tax income	% with tax cut	% with tax increase	% change in after tax income	% with tax cut	% with tax increase	% change in after tax income	% with tax cut	% with tax increase
Lowest Quintile	-0.4	16.8	13.5	-0.6	16.6	13.5	7.3	94.1	5.9
Second Quintile	-1.0	34.1	39.3	-1.4	33.2	40.3	1.6	69.6	30.4
Middle Quintile	-0.6	35.9	56.0	-1.0	30.2	61.7	0.1	47.7	52.3
Fourth Quintile	-0.3	45.2	53.3	-0.7	39.3	59.2	-0.6	38.0	62.0
Top Quintile	0.5	53.5	45.6	0.9	54.2	44.8	-0.8	29.1	70.9
All	0.0	34.8	39.4	0.0	32.5	41.7	0.0	59.9	40.1
<b>Top Quintile Breakdown</b>									
80-90th percentiles	-0.4	43.3	55.8	-0.6	46.3	58.9	-1.3	27.7	72.3
90-95th percentiles	0.1	55.6	43.6	0.2	41.7	42.3	-1.0	28.9	71.1
95-99th percentiles	0.7	68.1	30.7	1.2	49.8	21.2	-0.8	31.4	68.6
Top 1 percent	1.5	87.5	10.6	2.5	74.6	9.1	-0.2	34.2	65.8
Top 0.1 percent	1.5	88.5	8.2	2.6	81.0	7.6	0.0	37.6	62.4

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0309-2) Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI.

If all marginal tax rates were instead cut across the board to keep revenue constant, eliminating the health preferences would allow a 12.5 percent rate cut. The marginal tax rates would then range from 8.8 to 30.6 percent. Compared with the constant percentage of income rate cut, the proportional rate cut combined with eliminating tax expenditures would benefit high-income taxpayers and hurt low and middle-income taxpayers even more. Taxpayers in the second quintile of the income distribution would see their after-tax income fall by 1.4 percent, while taxpayers in the top 1 percent would experience a 2.5 percent increase in after-tax income.

As with the housing preferences, however, if health tax expenditures were replaced with a flat rate refundable credit, low-income taxpayers would benefit the most. Taxpayers in the middle of the income distribution, however, would either receive

virtually no net benefit (the middle quintile) or see their after-tax income decrease (the fourth quintile), as taxes on their health benefits would cost them more than the gain from the credit. Taxpayers in the 80<sup>th</sup> through 90<sup>th</sup> percentiles of the income distribution would experience the biggest net losses. The top 10 percent would lose less as a share of income because health tax benefits increase very little at the top of the income distribution, and therefore fall sharply as a share of income. Put another way, financing health tax expenditures with flat rate per capita benefit cuts hurts the lowest income people the most, but has no net effect on the middle quintile and produces net gains for the fourth quintile of the income distribution and above, although these gains as a share of income shrink considerably at the top of the distribution.

### **Distributional Effects of Tax Expenditures for Retirement Saving**

The 2010 Federal Budget lists five permanent tax expenditures for retirement saving. These provisions (and their 2012 estimated revenue losses) are net exclusion of pension contributions for: employer-contributory plans (\$42.2 billion), 401(k) and other employer-sponsored salary reduction plans (\$72.0 billion), individual retirement accounts (\$16.5 billion), the low and moderate income Savers Credit (\$1.0 billion), and Keogh plans for the self-employed (\$17.0 billion).

For these tax expenditure estimates, the baseline tax system is assumed to be how this saving would be treated if invested outside of qualified retirement accounts. Under the baseline income tax, contributions to saving accounts would come from after-tax dollars, income accrued within accounts would be taxable (though allowed preferences for capital gains and dividends available for assets outside accounts), and payouts from accounts (either lump sum withdrawals or pension benefits) would be tax-free. Therefore, the tax expenditure consists of three parts: 1) the loss of revenue from exemption of employer contributions and deductibility of employee and other individual contributions plus 2) the loss of revenue from exemption of income accrued within accounts minus 3) the offsetting gain in revenue from taxing withdrawals from accounts.

The estimated tax expenditure does not provide a good measure of the incentive effect of current saving incentives. Instead it measures the net loss in revenue from current law compared with an alternative system that would have permanently taxed the income from these accounts on an accrual basis. It mixes together the effects of permanent exemption of the annual inside buildup within accounts, deferral of tax on current year contributions (to be captured later when withdrawn), and an additional tax on current year payouts to individuals who saved in earlier years.

#### *Provisions Estimated*

We estimate the combined distributional effects of all the retirement savings incentives listed by OMB except for the (very modest) lower and moderate-income Savers Credit. In our estimates, we calculate separately the revenue effects of losses from exempting the inside buildup within defined contribution accounts (employer-sponsored plans, individual retirement accounts, and plans for the self-employed) and exempting the buildup of retirement wealth within defined benefit plans.

#### *Components of the “Cash-Flow” Tax Expenditure*

Following the OMB methodology, we estimate the components of the revenue gain if there were no taxation in 2012 (table 5) as:

- Gains from disallowing deductions of contributions to employer plans (\$108.8 billion), IRA contributions (\$3.5 billion), and deductions for self-employed plans (\$7.1 billion);
- An offsetting loss from exempting from tax current pension income (\$110.7 billion), and
- Gains from taxing the inside buildup in defined contribution plans (\$90.6 billion) and defined benefit plans (\$103.0 billion).

Table 5: Distributional Effects of Absence of Tax Incentives for Retirement Saving\*

	Percent Change in After-Tax Income	Share of Total Tax Change
<b>Cash Income Percentile</b>		
Lowest Quintile	-0.0	0.0
Second Quintile	-0.4	1.6
Middle Quintile	-0.8	5.7
Fourth Quintile	-1.4	13.1
Top Quintile	-3.2	79.6
All	-2.1	100.0
<b>Top Quintile Breakdown</b>		
80-90th percentiles	-3.2	20.2
90-95th percentiles	-4.2	18.5
95-99th percentiles	-4.1	25.1
Top 1 percent	-2.0	15.7
Top 0.1 percent	-1.4	4.7
<b>Memo: Revenue Effect (in billions of dollars)</b>		
All Provisions		198.8
Exclude pension income from AGI		-110.7
No deductions for contributions to employer plans		108.8
No deductions for IRA contributions		3.5
No deductions for self-employed plans		7.1
Tax inside buildup in defined contribution plans		90.6
Tax inside buildup in defined benefit plans		103.0

\*1) No deductions for employee contributions to IRAs, employer-sponsored salary reduction plans, and qualified retirement plans for self-employed.  
 2) Tax accrued interest, dividends, and capital gains within qualified retirement plans and tax inside buildup of wealth within employer-sponsored defined benefit plans.  
 3) Exempt private pension benefits and other withdrawals from qualified plans from tax.

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0509-1)  
 Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI.

The simple sum of all these gains and losses is \$202.3 billion. Of this amount, \$193.6 billion (96 percent) comes from exempting inside buildup; the net effect of deferral of the tax on contributions is only \$8.7 billion. Including interactions among provisions, we estimate the combined effect of eliminating all provisions is \$198.8 billion. The

combined effect is slightly smaller than the sum of the separate estimates.<sup>11</sup>

### *Eliminating Tax Expenditures for New Saving*

As an alternative, we also estimate the effects of eliminating tax incentives for new saving only. Under this option, there would be no future contributions to tax-qualified accounts and future accruals within defined benefit plans would be taxable. Amounts within qualified defined contribution retirement savings accounts would continue to accrue tax-free and pension benefits would continue to be taxable as under current law (with exemption only of amounts that represent return of capital and payments from Roth accounts.)

We calculate the change in tax burden as the change in the present value of lifetime benefits on new contributions. We assume that individuals projected under current law to contribute to a qualified retirement plan in 2012 would keep their assets in the plan until age 65 and then withdraw the money in the form of a life annuity. Under current law, for a front-loaded plan, the contribution is deductible, the inside buildup is tax free, and the annuity taxable. For a Roth account, the contribution comes from after-tax income, but both the inside buildup and the retirement annuity are tax-free. Under the option we estimate, the contribution would come from after-tax income, investment income within the account would be taxable (including investment income on remaining assets during the draw down phase in retirement) and payouts would be tax-free. We compute the sum for all tax units (in total and in separate income groups) of the difference between the present value of retirement income from *2012 contributions* under current law and under the option we estimate.<sup>12</sup>

We estimate that the present value of eliminating tax incentives for new saving in 2012 is \$230 billion. This is not the same as the associated revenue loss; the revenue loss in 2012 would be much smaller because the proposal would leave most inside-buildup within tax-free accounts in 2012 tax-free; only gradually over time, would more inside buildup become taxable as the share of assets in these accounts declines.

### *Effects on After-Tax Distribution of Income*

If tax expenditures for retirement saving had never been in the tax law, income would fall by 3.2 percent for tax units in the top quintile of the distribution, compared with 2.1 percent for all taxpayers (table 5). Throughout the distribution, tax units in higher quintiles would lose more as a share of income from removal of the preferences than tax units in lower quintiles. Taxpayers in higher income quintiles benefit more from the preferences because they save more, are more likely to work in firms with pension coverage, and receive bigger tax savings per dollar of investment from tax-exemption because they are in higher marginal rate brackets. Within the top quintile, the loss from removal of the preferences continues to increase up through the 90<sup>th</sup> to 95<sup>th</sup> percentiles. Taxpayers at the very top, however, benefit less from the preferences as a share of their

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<sup>11</sup> There could be a negative interaction if some people have both inside buildup of tax-free pension accounts and receive payouts from pensions. The taxation of inside buildup could push them into higher marginal rate brackets, raising the offsetting revenue loss from exempting pension payouts.

<sup>12</sup> A similar method is used in Burman et al. (2004) to estimate the distributional effects of retirement saving preferences.

income because of limits on the amounts that can be contributed to retirement saving plans.

The distributional effects of eliminating new contributions to retirement savings accounts are similar to those of repealing all existing tax expenditures for retirement (table 7). The percentage fall in after-tax income from repeal rises from the bottom through the top quintile and continues to rise in the top quintile through the 90<sup>th</sup> to 95<sup>th</sup> percentiles. The percentage loss in after-tax income declines, however, as income increases within the top 5 percent of the income distribution.

*Effects Using Alternative Offsets*

We estimate that absent retirement saving incentives, the same revenue could have been raised in 2012 by reducing all marginal tax rates by 3.12 percent of income (to a range of 6.88 to 31.88 percent), reducing all marginal tax rates by 14.9 percent (to a range of 8.51 to 29.79 percent), and providing a refundable tax credit to each tax unit equal to \$781 for each adult and \$391 for every dependent child under age 17. Under this latter policy, a couple with two children would receive \$2,343 (table 6).

Table 6. Distributional Effects of No Tax Preferences for Retirement Saving* With Revenue Neutral Tax Rebates (Income Tax Effects Only), Tax Year 2012									
Cash Income Percentile	Lower All Tax Rates by 3.12% of Income			Lower All Tax Rates by 14.9%			\$781 per capita refundable credit		
	% change in after tax income	% with tax cut	% with tax increase	% change in after tax income	% with tax cut	% with tax increase	% change in after tax income	% with tax cut	% with tax increase
Lowest Quintile	0.2	16.8	5.4	0.1	16.4	5.8	9.2	99.8	0.2
Second Quintile	0.6	52.0	21.8	0.2	49.1	24.8	4.0	93.0	7.0
Middle Quintile	1.0	62.9	28.7	0.4	57.0	34.6	2.0	78.2	21.7
Fourth Quintile	0.9	60.8	37.1	0.3	54.6	43.5	0.7	61.8	38.1
Top Quintile	-0.8	42.6	56.6	-0.3	41.7	57.4	-2.4	31.6	68.4
All	-0.0	45.0	26.7	0.0	41.9	29.8	0.0	77.4	22.6
Top Quintile Breakdown									
80-90th percentiles	-0.6	44.6	54.5	-0.9	40.6	58.6	-1.7	37.0	63.0
90-95th percentiles	-1.7	37.7	61.5	-1.6	37.2	61.9	-3.1	28.3	71.7
95-99th percentiles	-1.5	39.5	59.8	-0.8	44.2	55.1	-3.5	25.1	74.9
Top 1 percent	0.2	57.5	41.3	1.4	65.2	33.8	-1.9	19.0	81.0
Top 0.1 percent	0.7	68.8	30.1	1.9	75.1	23.9	-1.3	12.7	87.3
<p>*1) No deduction for employee contributions to IRAs, employer-sponsored salary reduction plans, and qualified retirement plans for self-employed.            2) Tax accrued interest, dividends, and capital gains within qualified retirement plans and tax inside buildup of wealth within employer-sponsored defined benefit plans.            3) Exempt private pension benefits and other withdrawals from qualified plans from tax.</p> <p>Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0509-1). Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI.</p>									

**Table 7: Distributional Effects of Eliminating Tax Incentives on New Contributions to Retirement Saving Accounts\***

	Percent Change in After Tax Income	Share of Total Tax Change
<b>Cash Income Percentile</b>		
Lowest Quintile	-0.1	0.2
Second Quintile	-0.7	2.8
Middle Quintile	-1.5	9.6
Fourth Quintile	-2.4	20.7
Top Quintile	-3.1	66.8
All	-2.4	100.0

**Top Quintile Breakdown**

80-90th percentiles	-3.7	20.9
90-95th percentiles	-4.1	15.8
95-99th percentiles	-3.7	19.9
Top 1 percent	-1.5	10.2
Top 0.1 percent	-0.9	2.8

\*1) Reduce contribution limits to zero for all qualified retirement saving accounts, including IRA's employer-sponsored plans, self-employed plans

2) Tax future accruals of income with defined benefit plans.

Present value is the lifetime present value of change in lifetime benefits from current year contributions. We assume contributions accrue until age 65, and are thereafter withdrawn as a life annuity.

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0309-2)  
Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI.

Substituting lower marginal tax rates for retirement saving incentives would raise after-tax income for taxpayers in the bottom four quintiles, lower after-tax income in the

top quintile, but raise after-tax income for the top 1 percent of returns. Compared with a uniform cut in rates as a share of income, a uniform percentage cut in rates would help low-income groups less and benefit the very highest income taxpayers more. The top 1 percent of taxpayers would be the biggest winners from substituting an across the board rate cut for saving incentives, but taxpayers in the 80<sup>th</sup> through 99<sup>th</sup> percentile of the distribution would see their after-tax income decline. In contrast, replacing the savings incentives with a uniform refundable credit would benefit taxpayers in the bottom four quintiles of the distribution and hurt all groups within the top quintile. The biggest losers would be taxpayers in the 95<sup>th</sup> to 99<sup>th</sup> percentiles of the income distribution.

The distributional effects of substituting rate cuts or uniform grants for incentives for new saving are similar to the effects for replacing tax expenditures (table 8). Taxpayers in the bottom four quintiles and the top 1 percent of the distribution benefit would gain if incentives for new retirement saving were eliminated and replaced with a “burden neutral” tax cut equal to 3.25 percent of income<sup>13</sup> and taxpayers in the 80<sup>th</sup> to 99<sup>th</sup> percentiles of the income distribution would lose. If, however, tax rates were cut by 15.9 percent (to a range of 8.41 to 29.44 percent), average after-tax income would also decline in the third and fourth quintiles because the tax cuts, now worth less than 3.25 percent of income in the 15 percent bracket, would not offset the benefit of lost saving incentives. The highest income taxpayers, however, would gain even more from the cut in marginal tax rates. With a burden neutral \$875 per capita refundable credit (\$2,625 for a family of four) as the fiscal offset, after-tax income would increase by more than 10 percent on average in the bottom quintile, but would decline in the fourth quintile and above.

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<sup>13</sup> Because the increased tax burden for cutting back these incentives would exceed the short-term revenue pickup, “burden-neutral” cuts in tax rates or uniform refundable credits would reduce revenue in the short run. The government would, however, ultimately recover the present value of this revenue loss because the annual revenue gain from eliminating tax incentives for new saving would increase over time as the stock of additional wealth subject to annual income taxation increases.

**Table 8: Distributional Effects of Eliminating Tax Incentives on New Contributions to Retirement Saving Accounts\*  
With Revenue Neutral Tax Rebates (Income Tax Effects Only), Tax Year 2012**

Cash Income Percentile	Lower All Tax Rates by 3.25% of Income			Lower All Tax Rates by 15.9%			\$875 per capita refundable credit		
	% change In after-tax income	% with tax cut	% with tax increase	% change In after-tax income	% with tax cut	% with tax increase	% change In after-tax income	% with tax cut	% with tax increase
Lowest Quintile	0.2%	19.7%	4.0%	0.0%	19.4%	4.2%	10.3%	99.7%	0.3%
Second Quintile	0.5%	54.0%	16.4%	0.0%	53.0%	18.4%	4.1%	93.8%	6.2%
Middle Quintile	0.5%	64.1%	26.5%	-0.1%	58.8%	31.8%	1.5%	79.4%	20.5%
Fourth Quintile	0.3%	65.8%	32.3%	-0.3%	59.8%	38.3%	-0.2%	67.0%	33.0%
Top Quintile	-0.3%	55.2%	43.3%	0.2%	55.1%	43.4%	-2.2%	45.7%	54.3%
All	-0.0%	49.5%	22.1%	0.0%	46.8%	24.6%	0.0%	80.6%	19.4%
<b>Top Quintile Breakdown</b>									
80-90th percentiles	-0.7%	54.5%	44.1%	-1.0%	51.8%	46.8%	-2.0%	47.9%	52.1%
90-95th percentiles	-1.2%	51.7%	47.0%	-1.0%	51.7%	47.0%	-2.9%	43.1%	56.9%
95-99th percentiles	-0.8%	56.0%	42.2%	0.0%	61.4%	36.8%	-3.0%	42.7%	57.3%
Top 1 percent	0.9%	74.8%	22.6%	2.2%	79.6%	17.8%	-1.4%	47.9%	52.1%
Top 0.1 percent	1.2%	79.9%	16.0%	2.6%	83.1%	12.8%	-0.9%	54.3%	45.7%
<p>*1) Reduce contribution limits to zero for all qualified retirement saving 2) Tax future accruals of income with defined benefit plans</p> <p>Present value is the lifetime present value of change in lifetime benefits from current year contributions. We assume contributions accrue until age 65, and are thereafter withdrawn as a life annuity.</p> <p>Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0309-2) Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI</p>									

### Further Comments on Incidence – Which Employees pay for Fringe Benefits?

The estimates of the effects of tax expenditures for health care and retirement saving in this paper assume that these tax-free benefits replace an equal amount of taxable cash wages or benefits for each employee. This implies that every dollar an employer contributes to an employee’s pension plans (through funding of defined benefit plans or matching contributions to 401(k) plans) or for health insurance benefits comes at the expense of a dollar of cash wages for that employee.

It is possible, however, that employers change the structure of cash wages in response to benefits that must provide a uniform basis to all employees within certain categories. Because tax-free benefits are worth more to high-wage than to low-wage employees, the latter may be unwilling to accept wage cuts to receive them. But high wage employees may be willing to sacrifice more than a dollar of cash wages to gain an additional dollar of tax-free fringe benefits because it costs them less to pay for fringe benefits through lower taxable wages than to buy them with after-tax dollars.

Employers who fund health insurance benefits typically make them equally available to all employees who work more than a specified number of hours (often half time). Salary-reduction plans allow participating employees to choose their preferred level of tax-favored contribution, but anti-discrimination rules limit the extent to which participation rates for highly-compensated employees can exceed those for others. As a

result, employers often match employee contributions to retirement saving plans or provide a floor level of contributions, in part to encourage the broad-based participation that would allow a plan to satisfy anti-discrimination requirements.

If the need for some uniformity in provision of fringe benefits within a firm causes employers to reduce cash compensation more for high-wage workers (who benefit from tax exemption the most) than for low-wage workers (who benefit little if at all from tax exemption), then the estimates we present make the tax incentives for health and employer-funded retirement saving look more regressive than they are. Changes in relative compensation induced by the tax preferences would reallocate some of the benefits of the tax saving from high-wage to low-wage workers in the form of changes in money wages. The result is that the benefits of the tax preferences for saving and health may be less tilted towards the top quintile of taxpayers than our estimates show.

## **Conclusions**

This paper has examined the distribution of tax expenditures for the three largest groups of tax expenditures for social programs – those that promote owner-occupied housing, health insurance, and retirement saving. The effects differ by provision based on differences in usage among income groups, with the saving preferences relatively more favorable to high-income groups and the health preferences relatively more favorable to lower and middle-income tax units. But, overall, we estimate broadly similar effects of provisions that allow an exemption or deduction for favored sources of income or consumption. In general, the main tax expenditures for housing, health care, and saving raise after-tax income more for higher-income than for lower-income taxpayers, but the very highest income taxpayers gain relatively less than all taxpayers as a percentage of their income. High-income taxpayers benefit more than low-income taxpayers because they are more likely to participate in the subsidized activities (i.e. home ownership, employer-sponsored health insurance, and retirement saving plans), gain more benefit per dollar of tax exemption, and, in the case of itemized deductions, are more likely to be itemizers. But the very highest income taxpayers gain less than in proportion than others either because at very high income levels their expenditure on the subsidized activity (e.g., housing or health insurance) declines as a share of income or because the dollar amount of qualifying activity (e.g., contributions to tax-favored retirement saving) is capped by the tax law.

The net distributional effect of tax expenditures depends on how one assumes they are financed. We have examined three alternatives. If the tax expenditures are assumed to be paid by tax rates that are a constant percentage of income higher for everyone, high-income taxpayers in general are net winners and both low income and the very highest income taxpayers are net losers. The results would be similar if the tax expenditures are assumed to be paid for by proportionally higher marginal tax rates for everyone, except that this more progressive way of raising the additional revenue to pay for tax expenditures results in smaller net losses for low-income taxpayers and bigger net losses for the very highest income taxpayers. Taxpayers in the lower half of the top income quintile are still the biggest net winners. If the tax incentives are assumed to be paid for by lower per capita cash benefits, then all low income groups are losers and high income groups are winners. Taxpayers in the top quintile, but below the top 1 percent in the income distribution, continue to be the biggest winners.

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## APPENDIX: DISTRIBUTION OF OFFSETS

Table A1 shows the distributional effects of the three offsets we use to return money to taxpayers when tax expenditures are eliminated. The tax cuts are scaled to each reduce revenue by \$100 billion in 2009. The three options are:

- Cut marginal tax rates across the board by 7.3 percent. This reduces the bottom rate from 10 to 9.27 percent and the top rate from 35 to 32.45 percent.
- Cut marginal tax rates for everyone by 1.49 percent of income. This reduces the bottom rate from 10 to 8.51 percent and top rate from 35 to 33.51 percent.
- Provide every tax unit with a refundable credit of \$392 per adult, with an additional \$196 for each dependent child age 17 and under.

The three forms of tax cuts have very different distributional effects. The uniform cut in marginal tax rates is the most favorable to high-income taxpayers, reflecting the graduated rate structure under current law. It raises after tax income on average by 1.08 percent in the top quintile, compared with only 0.06 percent in the bottom quintile and 0.82 percent overall. The highest income taxpayers benefit the most. (The top 0.1 percent and top 1 percent benefit a little bit less proportionately than the 95<sup>th</sup>-99<sup>th</sup> percentiles, reflecting the fact that a very large of their income is capital gains and dividends and does not benefit from the cut in marginal tax rates on ordinary income.)

The uniform percentage cut in marginal tax rates as a share of income also benefits high income taxpayers more than others, but not as much as a uniform percentage cut in rates. Very low income taxpayers benefit little from any marginal rate cut because much of their income is untaxed, due to personal exemptions, credits (child credit and earned income tax credit), and the standard deduction. The very highest income taxpayers gain less than others because more their income comes in the form of dividends and capital gains, which don't benefit from cut in rates on ordinary income. And taxpayers in the highest brackets receive a smaller rate cut under this option than they do with an equal percentage cut in marginal rates.

In contrast, the refundable credit raises after-tax income by the largest percentage for the lowest income taxpayers, because the credit varies little by income level. The only source of variation among income groups is variation across income in the number of adults and dependent children per tax unit. Thus, the credit as a share of income declines sharply as income rises. The credit raises after-tax income overall by 4.4 percent in the bottom quintile, but by only 0.3 percent in the top quintile and 0.04 percent for taxpayers in the top 1 percent of the income distribution.

Table A1. Distributional Effects of Offsets per \$100 billion of Revenue Raised

Cash Income Percentile	Percent Change in After Tax Income			Share of Total Tax Change		
	Uniform Percentage Cut in Marginal Tax Rates	Uniform Percentage Point Cut in Marginal Tax Rates	Uniform Per-Capita Refundable Credit	Uniform Percentage Cut in Marginal Tax Rates	Uniform Percentage Point Cut in Marginal Tax Rates	Uniform Per-Capita Refundable Credit
Lowest Quintile	0.06	0.11	4.42	0.3	0.5	20.3
Second Quintile	0.25	0.43	1.91	2.6	4.5	19.9
Middle Quintile	0.51	0.74	1.15	8.7	12.7	19.7
Fourth Quintile	0.70	0.92	0.81	17.2	22.5	19.9
Top Quintile	1.08	0.90	0.30	71.2	59.8	19.6
All	0.82	0.82	0.82	100.0	100.0	100.0
<b>Top Quintile Breakdown</b>						
80-90th percentiles	0.89	1.00	0.59	14.8	16.7	9.8
90-95th percentiles	1.01	0.99	0.43	11.6	11.3	4.9
95-99th percentiles	1.20	0.95	0.24	19.5	15.5	3.9
Top 1 percent	1.17	0.75	0.04	25.3	16.3	1.0
Top 0.1 percent	1.07	0.65	0.01	10.8	6.5	0.1

The following changes would reduce revenue by \$100 billion in 2012:

- 1) an across the board cut in marginal tax rates of 7.3 percent, reducing the range of rates to 9.27 to 32.45;
- 2) a cut in marginal tax rates of 1.49 percent of income, reducing the range of rates to 8.51 to 33.51; and
- 3) a refundable credit of \$392 per capita (\$196 for children 17 and under).

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0309-2)

Simulations assume baseline law is current policy, defined as current law with Bush tax cuts extended and 2009 AMT exemptions extended and indexed to changes in CPI

