

# *Flattening Tax Incentives for Retirement Saving*

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## Introduction

The United States' pension system has failed millions of workers who enter into retirement with very limited assets relative to what they need to live securely the rest of their lives. According to Survey of Consumer Finance data, about 40 percent of households headed by someone near retirement (ages 55–64) do not hold any assets in retirement savings accounts. The median retirement savings account balance for all households in this age group is only \$12,000 (Rhee 2013).<sup>1</sup>

At the same time, the pension landscape has been gradually shifting away from defined benefit (DB) pension plans toward defined contribution (DC) plans. The shift is especially pronounced in the private sector. Between 1989 and 2012, the proportion of private industry full-time workers participating in DB pension plans declined from 42 to 19 percent, while the share participating in DC plans increased from 40 to 51 percent (Bureau of Labor Statistics 2013; Wiatrowski 2011). While DB plans often provide significant benefits for the lucky minority who have been in a single job for many years before retirement, DC plans can be more beneficial for a mobile workforce. At the same time, the transition from DB to DC plans has also presented new challenges.

Because DB pensions are tied to employers, long-term workers sometimes achieve adequate protection even without much planning on their own part. They are automatically enrolled and often do not even have to contribute. Benefits are automatically paid when workers retire. With DB pensions, employers bear the responsibility for ensuring that employees receive pension benefits. In contrast, DC retirement accounts are owned by employees. With most DC plans, the most familiar of which are 401(k)-type plans, workers bear the responsibility for their own financial security. Unless such plans include automatic features, workers have to actively decide to participate, how much to contribute, which investments to put their money in, and how to manage their benefits through retirement.

As a result, 2013 participation rates among private wage-and-salary workers who were offered an employer retirement plan were 87 percent in DB pensions but only 71 percent in DC plans (Bureau of Labor Statistics 2013). Furthermore, workers in DC plans often contribute far less than the maximum statutory amount or what would be required to help secure their retirement. Using administrative data, Butrica and Smith (2012) find that workers' median contribution in 2010—\$2,488 (in 2011 dollars)—was well below the statutory maximum contribution limit (\$16,500 or \$22,000 if over age 50), even for the highest earners.

The benefits of 401(k)-type DC plans are also highly skewed toward higher-income workers. This occurs for several reasons. One, participation and contributions are highest among high-salary workers (Butrica and Smith 2012; Kawachi, Smith, and Toder 2005), with higher-income workers devoting especially high shares of their wages to retirement saving. Two, for each dollar saved, taxpayers in high tax brackets benefit the most from the tax preferences for DC plans. Thus, tax policy directly affects the amount of wealth individuals can accumulate during their working years to support themselves in retirement.

This paper focuses on the effects of the tax preferences for employer-sponsored defined contribution plans. Using two notable microsimulation models, we simulate the effect of changes in contribution limits to retirement plans, the saver's credit, and the exclusion of contributions from taxable income on current and future taxes and retirement savings. We find that reducing 401(k) contribution limits would primarily increase taxes for the richest taxpayers; expanding the saver's credit would raise saving incentives and lower taxes for low- and middle-income taxpayers; and removing the exclusion for retirement saving incentives and replacing it with a 25 percent refundable credit will benefit some taxpayers—mainly low- and middle-income taxpayers—while raising taxes and reducing retirement assets for others—primarily those at the top of the income distribution.

Our findings should be interpreted with caution. Actual legislation for flattening tax incentives requires more than the simple adjustments discussed here. For instance, if a credit-based approach is used, then the laws would need to ensure some recapture of those benefits for those who made contributions one year and withdrew them soon thereafter.

Additionally, the behavioral responses by both employers and employees will affect the final savings outcomes achieved under reform but are beyond the scope of our estimates. For instance, employees may save more in response to improved incentives, in which case the benefits to low lifetime income households would be greater than we find. On the other hand, employers might reduce their contributions in response to some of the policy changes outlined. In this case, the tax and savings benefits we find would be overstated. While our policy simulations are illustrative, addressing these behavioral responses would be a chief concern in tailoring specific policies to create the best incentives.

## Background

To understand how policy changes could influence saving, we must first recognize the historical and current income tax treatment of contributions to retirement savings accounts.

## **401(k) and Other Employer-Sponsored Defined Contribution Plans**

Defined contribution pension plans, which include 401(k)s, are now the most common type of retirement benefit. In these plans, employees may contribute to a retirement account, with the contributions generally limited by law and also by plan design either to a percentage of salary, an annual dollar amount, or both. Employers often supplement employee contributions with a matching contribution up to a limit. Some employers also make a contribution to all employees eligible to participate.

In the standard 401(k)-type plan, both employer and employee contributions are excluded from wages subject to income tax (although employee contributions are subject to payroll tax). Recently employers have also been allowed to offer Roth-style plans in which employees may make after-tax instead of pretax contributions. Withdrawals from the accounts are included in taxable income unless attributed to Roth contributions, transferred to an individual retirement account (IRA) or used to purchase an annuity (Johnson, Burman, and Kobes 2004). Many plans offer in-service distributions such as loans or hardship withdrawals. For most taxable distributions before age 59½, individuals must also pay a 10 percent penalty tax. Individuals who terminate employment after age 55 are exempt from the penalty tax.

The tax law limits how much employees may contribute to tax-qualified employer-sponsored plans and restricts access to both traditional and Roth IRAs to taxpayers with incomes below ceiling amounts. The Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) increased the contribution limits for both IRAs and employer-sponsored retirement saving plans over a period of years, thereby directly raising this source of retirement benefits for plan participants who were constrained by contribution limits. It also increased income limits for IRA participation. The Pension Protection Act of 2006 made the increased contribution limits permanent and indexed them to inflation. Under this act, the amounts employees may contribute in 2014 are \$17,500 for all employees plus an additional \$5,500 for employees ages 50 and older.

Despite the tax incentives designed to increase both participation and contributions in retirement savings accounts, both employee contribution rates and contribution amounts are relatively low for most low- and middle-income employees. According to administrative data from W-2 records, the median contribution rate in 2010 was 6.7 percent for workers earning at least \$100,000 but only 3.6 percent for those earning \$10,000 or less (Butrica and Smith 2012). In addition, the median contribution amount among workers was well below the statutory maximum contribution limits—even for the highest earners.

Using the same data, Kawachi and colleagues (2005) find that the share of employees contributing the maximum allowed amounts increased between 1990 and 2003, but that most of this increase was by workers who were already in high contributing groups (more educated, high earners). Because fewer than 8 percent of participants contributed the maximum amount in 2003, the authors conclude that increases in the maximum allowable contribution would have little effect on retirement savings for most workers.

The combination of higher take-up and larger benefit for upper-income taxpayers means that retirement saving incentives benefit those at the top of the income distribution the most. Using the Urban-Brookings Tax Policy Center (TPC) microsimulation model, Burman and colleagues (2004) find that DC plans and IRAs are decidedly regressive; they raise after-tax income 1.4 percent for the top quintile, 0.7 percent for the middle quintile, and just 0.1 percent for the bottom quintile. Further, the saver's credit raises after-tax income 0.1 percent for the second and third quintiles, with no effect for other taxpayers. Similarly, CBO (2013) finds that the tax preference for retirement saving incentives raises after-tax income 2.0 percent for the top quintile, but just 0.8 percent for the middle quintile and 0.4 percent for the bottom quintile. Using the TPC model, more recent work by Harris and colleagues (2014) finds similar effects on after-tax income by quintile: about 70 percent of the tax preferences for employer-based DB and DC retirement accounts accrue to the top income quintile, and only about 12 percent goes to the lowest three income quintiles.

## **The Saver's Credit**

The saver's credit provides federal tax credits for low- and moderate-income workers' contributions to their retirement savings accounts. It is nonrefundable, however, so low-income people with no tax liability do not benefit. The credit reduces income tax liabilities and is not, unless the worker elects, contributed directly to retirement savings accounts. Under current law, the saver's credit provides a tax credit of up to \$1,000 (\$2,000 if married filing jointly) for low- and moderate-income taxpayers who contribute to a retirement savings account. The credit equals 50 percent, 20 percent, or 10 percent of contributions, depending on taxable income, for those with incomes up to \$29,500 (\$59,000 for joint filers) in 2013. Taxpayers with incomes above these thresholds are ineligible for the credit.

The eligibility limits on the saver's credit make it much more progressive than other preferences for retirement saving. Virtually all benefits of the saver's credit accrue to taxpayers with gross incomes between \$10,000 and \$75,000, with slightly larger average benefits for

those in the \$20,000-to-\$30,000 income group relative to others (Gale, Iwry, and Orszag 2005).

## Policy Options

We consider three hypothetical policy scenarios, effective in 2014, to increase retirement savings for low- and moderate-income workers. We model these scenarios using the TPC Microsimulation Model and the Urban Institute's Dynamic Simulation of Income Model (DYNASIM3). With the TPC Microsimulation model, we show the impact of these alternative retirement savings policies on taxes in 2015. With DYNASIM3, we show the impact on lifetime taxes and income. These scenarios are simplified to show the types of distributional and incentive changes possible from movements in this direction; they are not refined to deal with other considerations, such as locking in deposits and credits into retirement solution. More information on these microsimulation models is available in the appendices.

### Reduce 401(k) Contribution Limits

In 2013, the pre-age 50 employee contribution limit on tax-deferred retirement accounts was \$17,500 and the total contribution limit including employer contributions was \$51,000. Employees age 50 and older could contribute an additional \$5,500. In this scenario, we lower the total contribution limit for all employees, regardless of age, to the lesser of \$20,000 or 20 percent of an employee's salary. Because high-income taxpayers are most likely to contribute to 401(k)s and to contribute the maximum, this policy scenario will especially limit the tax benefits for high-income taxpayers.

We assume that employees continue to save the same amount from their paychecks, but that the amount they save above the new contribution limits is put into a non-tax-deferred account earning the same rate of return. We also index future contribution limits to price changes through 2023 and to wage changes after 2023.

Employees who would have saved less than the new contribution limits will be unaffected under this scenario, while those who saved more than the new contribution limits will be worse off. In general, we expect income taxes to increase under this alternative policy scenario. Although we model these results under the simplified assumption that the reform does not influence the behavior of employees and employers, it is possible that high-income workers might shift assets to lightly taxed assets such as life insurance and variable annuities, capital



gains assets, or tax-exempt bonds and some employers might reduce their contributions because they are now considered taxable compensation.

## **Expand the Saver's Credit**

In this scenario, we model the impact of an expanded saver's credit. Similar to President Obama's previous budget requests, we assume the credit would be fully refundable and available to more taxpayers. We model a 50 percent credit up to \$1,000 (\$2,000 if married filing jointly) for taxpayers with incomes up to \$36,400 (\$72,700 for joint filers).<sup>2</sup> We also allow the credit to phase out at a 5 percent rate for incomes above these thresholds. In contrast, the current saver's credit provides no benefit for incomes above the maximum income thresholds and can create proportionately large increases in taxes for savers whose incomes just cross a threshold. We adjust the credit amounts and brackets for price changes through 2023 and changes in average wages after 2023, based on the Social Security trustees' intermediate-cost projections.

This alternative policy scenario would provide better saving incentives for low-income taxpayers, who benefit little or not at all from tax-deferred retirement accounts. Overall, we expect income taxes to decline under this alternative policy scenario.

## **Remove the Tax Exclusion and Provide a Credit for 401(k) Contributions**

In this scenario, we no longer exclude employee and employer contributions to 401(k) and other qualified plans from income subject to taxation. Employer contributions to 401(k) plans would be considered taxable compensation, subject to both income and payroll tax just as current wages are. In place of the tax exclusion, we give taxpayers a flat-rate refundable tax credit of 25 percent on employee and employer contributions.

The goal of this alternative policy scenario is to create more incentives for low- and middle-income households to increase their retirement account contributions. Under current law, high-income households benefit most from the tax benefits. Under our alternative scenario, low-income households with identical rates of return and saving horizons as high-income households would receive a higher benefit. Taxpayers with marginal tax rates below 25 percent will gain under this scenario, while those with marginal tax rates of more than 25 percent will lose. Although we assume the reform does not influence employee and employer behavior, employers might reduce their contributions given the changed incentives.

## Results

Table 1 summarizes the winners and losers under each of our scenarios. We define winners and losers as adults with at least a 1 percent gain or loss in lifetime income taxes. Based on this definition, most adults will experience no change in their lifetime taxes under any scenario. If 401(k) contribution limits were reduced to the higher of \$20,000 or 20 percent of earnings, 9 percent of adults would pay more in lifetime taxes and no one would pay less. If the saver's credit were expanded and made refundable, 20 percent of adults would pay less in lifetime taxes and no one would pay more. And, if the 401(k) tax preferences were eliminated and replaced with a 25 percent matching contribution, 9 percent of adults would pay less in lifetime taxes and 24 percent would pay more. Without the matching contribution, no one would pay less in lifetime taxes and 49 percent would pay more.

**TABLE 1**

**Winners and Losers in Lifetime Taxes under Four Scenarios (percent)**

	Win	Lose	No change
Reduce 401(k) contribution limits	0	9	91
Expand saver's credit	20	0	79
Eliminate tax preference, give credit for 401(k) contributions	9	24	67
Eliminate 401(k) tax preference	0	49	51

**Source:** Dynamic Simulation of Income Model, version 3.

**Notes:** Winners and losers are adults experiencing at least a 1 percent gain or loss in lifetime income taxes. Rows do not always total 100 because of rounding.

### Reduce 401(k) Contribution Limits

This proposal will slightly reduce the income of taxpayers in the top income quintile and have a very limited impact on those in the bottom 80 percent of the income distribution in 2015 (table 2). While only 3 percent of taxpayers overall will see their taxes increase, 14 percent of those in the top income quintile will pay more. The richest 20 percent of taxpayers will see their after-tax income decline 0.2 percent as a whole, and those affected will pay about \$2,956 more in taxes. The largest average decline in after-tax income will accrue to those in the 95th to 99th percentile, who will see their after-tax income decline 0.3 percent; those in the 80th to 95th percentile will only see their after-tax income decline 0.1 percent.

**TABLE 2****Limiting Contributions to the Lesser of 20 Percent of Earnings or \$20,000**

Distribution of federal tax change by expanded cash income percentile, 2015

Expanded cash income percentile <sup>a</sup>	TAX UNITS WITH TAX INCREASE OR CUT <sup>b</sup>				Percent change in after-tax income <sup>c</sup>
	Tax Cut		Tax Increase		
	Percent of units	Average cut (\$)	Percent of units	Average increase (\$)	
<b>All</b>	†	‡	<b>3.0</b>	<b>2,175</b>	<b>-0.1</b>
Lowest quintile	0.0	0	0.2	65	0.0
Second quintile	†	‡	0.6	246	0.0
Middle quintile	0.1	-264	1.3	433	0.0
Fourth quintile	†	‡	3.0	686	0.0
Top quintile	0.0	0	14.3	2,956	-0.2
Addendum					
80–90 percent	0.0	0	7.3	1,111	-0.1
90–95 percent	0.0	0	11.2	1,782	-0.1
95–99 percent	0.0	0	28.6	3,004	-0.3
Top 1 percent	0.0	0	42.3	7,462	-0.2
Top 0.1 percent	0.0	0	44.7	12,609	-0.1

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0613-3).

† Less than 0.05 percent

‡ Insufficient data

**Notes:** Calendar year 2015. Baseline is current law. For a description of TPC's current-law baseline, see <http://www.taxpolicycenter.org/taxtopics/Baseline-Definitions.cfm>.

a. Includes both filing and nonfiling units but excludes those that are dependents of other tax units. Tax units with negative adjusted gross income are excluded from their respective income class but are included in the totals. For a description of expanded cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>. The income percentile classes used in this table are based on the income distribution for the entire population and contain an equal number of people, not tax units. The breaks are (in 2013 dollars): 20%, \$24,844; 40%, \$48,286; 60%, \$82,182; 80%, \$137,646; 90%, \$188,937; 95%, \$271,750; 99%, \$638,232; 99.9%, \$3,279,269.

b. Includes tax units with a change in federal tax burden of \$10 or more in absolute value.

c. After-tax income is expanded cash income less individual income tax net of refundable credits, corporate income tax, payroll taxes (Social Security and Medicare), and estate tax.

Under this scenario, 9 percent of adults are projected to pay more in lifetime taxes (table 3). The youngest adults, who will experience lower contribution limits their entire work careers, are more likely to lose under this scenario than are older adults (13 percent of 25- to 39-year-olds lose but only 5 percent of 55- to 69-year-olds). In addition, adults paying the highest taxes under the baseline are more likely to lose than those paying the lowest taxes. The highest income taxpayers, after all, are most likely to participate in 401(k)s and to contribute up to the baseline contribution limits. As a result, DYNASIM projects that nearly a fifth of adults in the highest lifetime tax quintile would lose under this scenario, compared with only 2 percent of those in the lowest lifetime tax quintile.

**TABLE 3****Share of Losers and Amount Lost under Option to Reduce 401(k) Contribution Limit**

Baseline characteristics	Share (%)	Change in Average Lifetime Taxes		Change in Average Lifetime Income	
		Dollars (000s)	Percent	Dollars (000s)	Percent
<b>All</b>	9	19	3.7	-97	-2.2
<b>Age in 2014</b>					
25–39	13	24	3.6	-138	-2.5
40–54	12	20	3.9	-78	-1.9
55–69	5	6	2.5	-21	-0.9
70+	1	3	2.6	-7	-0.5
<b>Education</b>					
High school dropout	4	10	3.2	-41	-1.4
High school graduate	8	17	3.9	-75	-2.0
College graduate	14	24	3.6	-126	-2.3
<b>Race/ethnicity</b>					
White non-Hispanic	10	22	3.8	-101	-2.2
Black non-Hispanic	8	15	3.6	-75	-2.0
Hispanic	7	13	3.1	-78	-1.9
Asian/Native American	11	15	3.0	-112	-2.6
<b>Years worked</b>					
0–9	3	11	3.6	-62	-1.9
10–34	7	14	3.7	-66	-1.9
35 or more	12	22	3.7	-112	-2.2
<b>Quintile lifetime taxes</b>					
1st	2	2	11.6	-10	-0.8
2nd	4	2	7.9	-7	-0.6
3rd	9	4	4.8	-19	-1.0
4th	13	8	3.7	-45	-1.4
5th	19	39	3.6	-194	-2.6
<b>Top 10% lifetime taxes</b>					
No	8	8	3.5	-40	-1.3
Yes	21	59	3.7	-289	-3.0
<b>Top 5% lifetime taxes</b>					
No	9	10	3.6	-55	-1.6
Yes	21	89	3.7	-417	-3.5
<b>Top 1% lifetime taxes</b>					
No	9	13	3.0	-69	-1.6
Yes	14	449	6.3	-1,957	-10.0

**Source:** Dynamic Simulation of Income Model, version 3.

**Note:** Losers are adults experiencing at least a 1 percent loss in lifetime income taxes.

Overall, average lifetime taxes would increase \$19,000 or 3.7 percent among adults who are projected to lose under this scenario. The increase in taxes is highest for the youngest adults and those with high socioeconomic characteristics—namely, college graduates, non-Hispanic whites, those with many years of work experience, and those with the highest lifetime taxes. For example, average lifetime taxes are projected to increase \$24,000 or 3.6 percent for adults ages 25 to 39, but only \$6,000 or 2.5 percent for those ages 55 to 69. Although lifetime taxes among

adults in the highest quintile increase \$39,000, this represents only a 3.6 percent increase for them. In contrast, lifetime taxes among adults in the lowest quintile increase only \$2,000, but this represents an 11.6 percent increase for them.

Among those who would lose if 401(k) contribution limits were lowered, their average lifetime income would decline \$97,000 or 2.2 percent. For 25- to 39-year-olds who will be subject to the lower contribution limits their entire work careers, their average lifetime income would decline \$138,000 or 2.5 percent. And for adults in the highest lifetime tax quintile, their lifetime income is projected to decline \$194,000 or 2.6 percent. Among adults paying the top 1 percent of lifetime taxes, their lifetime income is projected to decline nearly \$2 million dollars or 10 percent.

### **Expand the Saver's Credit**

In 2015, this proposal will benefit taxpayers in the bottom 80 percent of the income distribution with almost no impact on the top 20 percent (table 4). Roughly one-quarter of taxpayers in the 20th through 80th percentile will receive a benefit, with the average tax cut amounting to roughly \$700. About one in ten taxpayers in the bottom quintile will see a tax cut, with the average benefit amounting to about \$360. Taxpayers in the bottom 80 percent will see their after-tax income increase about 0.4 percent. Under this scenario, 20 percent of adults are projected to pay less in lifetime taxes (table 5). Nearly a third of adults age 25 to 39 in 2014 will gain, in large part because they will experience the expanded saver's credit for their entire work careers. Those in the bottom and top quintiles of lifetime taxes are least likely to gain under this scenario. Lowest lifetime taxpayers are least likely to have 401(k)s—either because they are not offered or because they choose not to participate. Highest lifetime taxpayers generally have taxable income too high to qualify for the credit. However, 24 percent of those in the second quintile, 34 percent of those in the third quintile, and 27 percent of those in the fourth quintile are projected to gain under this scenario.

**TABLE 4****Expanded Savers Credit**

Distribution of federal tax change by expanded cash income percentile, 2015

Expanded cash income percentile <sup>a</sup>	TAX UNITS WITH TAX INCREASE OR CUT <sup>b</sup>				Percent change in after-tax income <sup>c</sup>
	Tax Cut		Tax Increase		
	Percent of units	Average cut (\$)	Percent of units	Average increase (\$)	
<b>All</b>	<b>22.0</b>	<b>-757</b>	<b>0.0</b>	<b>0</b>	<b>0.2</b>
Lowest quintile	9.2	-363	0.0	0	0.2
Second quintile	22.5	-601	0.0	0	0.4
Middle quintile	33.9	-752	0.0	0	0.5
Fourth quintile	36.8	-1,100	0.0	0	0.4
Top quintile	12.0	-571	0.0	0	0.0
Addendum					
80–90 percent	22.6	-573	0.0	0	0.1
90–95 percent	2.8	-523	0.0	0	0.0
95–99 percent	0.1	-1,406	0.0	0	0.0
Top 1 percent	†	‡	0.0	0	0.0
Top 0.1 percent	†	‡	0.0	0	0.0

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0613-3).

† Less than 0.05 percent

‡ Insufficient data

**Notes:** See table 2.

**TABLE 5****Share of Winners and Amount Gained under Option to Expand Saver's Credit**

Baseline characteristics	Share (%)	Change in Average Lifetime Taxes		Change in Average Lifetime Income	
		Dollars (000s)	Percent	Dollars (000s)	Percent
<b>All</b>	20	-3	-2.5	21	1.0
<b>Age in 2014</b>					
25–39	32	-4	-2.6	31	1.1
40–54	24	-2	-2.4	14	0.8
55–69	11	-1	-2.6	5	0.4
70+	1	-1	-2.9	2	0.2
<b>Education</b>					
High school dropout	19	-2	-3.6	15	1.0
High school graduate	22	-3	-2.6	19	0.9
College graduate	18	-4	-2.2	28	1.0
<b>Race/ethnicity</b>					
White non-Hispanic	19	-3	-2.3	20	0.9
Black non-Hispanic	25	-3	-3.0	22	1.2
Hispanic	23	-3	-2.6	23	1.1
Asian/Native American	22	-3	-2.7	23	1.0
<b>Years worked</b>					
0–9	12	-2	-3.8	16	1.2
10–34	22	-2	-2.7	15	0.8
35 or more	21	-3	-2.4	26	1.0
<b>Quintile lifetime taxes</b>					
1st	11	-1	-7.7	12	1.1
2nd	24	-1	-6.2	8	0.7
3rd	34	-3	-3.1	16	0.8
4th	27	-4	-2.0	34	1.0
5th	6	-7	-1.4	57	1.0
<b>Top 10% lifetime taxes</b>					
No	23	-3	-2.5	20	0.9
Yes	1	-9	-1.2	123	1.5
<b>Top 5% lifetime taxes</b>					
No	22	-3	-2.5	21	1.0
Yes	0	0	0.0	0	0.0
<b>Top 1% lifetime taxes</b>					
No	21	-3	-2.5	21	1.0
Yes	0	0	0.0	0	0.0

**Source:** Dynamic Simulation of Income Model, version 3.

**Note:** Winners are adults experiencing at least a 1 percent gain in lifetime income taxes.

Overall, average lifetime taxes would decline \$3,000, or 2.5 percent, and average lifetime income would increase \$21,000, or 1 percent, among adults who are projected to gain under this scenario. The youngest adults are projected to pay \$4,000 or 2.6 percent less in lifetime taxes and to have \$31,000 or 1.1 percent more in lifetime income. Adults in the third quintile of lifetime taxes are projected to pay \$3,000 or 3.1 percent less in taxes and to have \$16,000 or 0.8 percent more in income over their lifetimes.

## Eliminate Tax Preference and Give Credit for 401(k) Contributions

This scenario would raise the 2015 after-tax income of the bottom 80 percent of taxpayers 0.2 percent, while lowering the after-tax income of the top quintile by the same magnitude (table 6). About one in five taxpayers would receive a benefit, including about 10 percent of those in the top income quintile. Less than 10 percent of taxpayers would see their taxes increase, including 45 percent of taxpayers in the top income quintile. Ultimately, this proposal limits the retirement saving benefits for about half of taxpayers in the top income quintile and strengthens benefits for about one-quarter of those in the bottom four quintiles—especially middle-income earners. The average tax cut for beneficiaries is about \$400; those with a tax increase see their taxes rise about \$900.

**TABLE 6**

### Replacing Exclusion/Deduction for DC Pensions/IRA with 25 Percent Refundable Credit

Distribution of federal tax change by expanded cash income percentile, 2015

Expanded cash income percentile <sup>a</sup>	TAX UNITS WITH TAX INCREASE OR CUT <sup>b</sup>				Percent change in after-tax income <sup>c</sup>
	Tax Cut		Tax Increase		
	Percent of units	Average cut	Percent of units	Average increase	
<b>All</b>	<b>20.1</b>	<b>-396</b>	<b>9.5</b>	<b>876</b>	<b>0.0</b>
Lowest quintile	9.6	-223	0.2	66	0.2
Second quintile	20.5	-273	3.3	132	0.2
Middle quintile	26.7	-370	5.5	165	0.2
Fourth quintile	38.1	-524	7.7	251	0.2
Top quintile	10.7	-616	44.7	1,216	-0.2
Addendum					
80–90 percent	19.4	-567	30.9	313	0.0
90–95 percent	3.1	-957	45.4	487	-0.1
95–99 percent	0.7	-1,762	72.0	1,748	-0.4
Top 1 percent	1.0	-1,478	69.4	5,299	-0.3
Top 0.1 percent	2.2	-626	64.0	7,604	-0.1

**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0613-3).

**Notes:** See table 2.

Under this scenario, 24 percent of adults are projected to pay more in lifetime taxes (table 7). As expected, the highest lifetime taxpayers will be most impacted. For example, 58 percent of those in the top lifetime tax quintile, 70 percent of those in the top 5 percent of the lifetime tax distribution, and 62 percent of those in the top 1 percent of the lifetime tax distribution will pay more in lifetime taxes if 401(k) tax preferences are eliminated and replaced with a matching contribution.



**TABLE 7****Share of Losers and Amount Lost under Option to Eliminate Tax Preference and Give Credit for 401(k) Contributions**

Baseline characteristics	Share (%)	Change in Average Lifetime Taxes		Change in Average Lifetime Income	
		Dollars (000s)	Percent	Dollars (000s)	Percent
<b>All</b>	24	19	2.7	-141	-2.8
<b>Age in 2014</b>					
25–39	35	24	2.7	-209	-3.3
40–54	28	16	2.7	-97	-2.2
55–69	13	8	2.5	-32	-1.1
70+	1	4	2.6	-9	-0.5
<b>Education</b>					
High school dropout	10	11	2.6	-86	-2.7
High school graduate	20	15	2.6	-111	-2.6
College graduate	35	23	2.8	-179	-2.9
<b>Race/ethnicity</b>					
White non-Hispanic	26	20	2.7	-144	-2.7
Black non-Hispanic	22	14	3.0	-114	-3.0
Hispanic	18	16	2.6	-139	-3.0
Asian/Native American	20	18	2.9	-169	-3.3
<b>Years worked</b>					
0–9	8	12	2.7	-109	-3.5
10–34	19	13	2.7	-95	-2.5
35 or more	30	22	2.7	-166	-2.8
<b>Quintile lifetime taxes</b>					
1st	4	1	6.1	-7	-0.6
2nd	9	1	4.4	-6	-0.6
3rd	17	3	3.2	-14	-0.8
4th	30	7	2.9	-39	-1.3
5th	58	33	2.7	-262	-3.2
<b>Top 10% lifetime taxes</b>					
No	19	7	3.0	-45	-1.6
Yes	68	47	2.6	-380	-3.6
<b>Top 5% lifetime taxes</b>					
No	21	10	3.0	-67	-1.9
Yes	70	69	2.5	-572	-4.1
<b>Top 1% lifetime taxes</b>					
No	23	15	3.0	-109	-2.4
Yes	62	148	1.9	-1,328	-5.5

**Source:** Dynamic Simulation of Income Model, version 3.

**Note:** Losers are adults experiencing at least a 1 percent loss in lifetime income taxes.

Among everyone projected to lose under this scenario, average lifetime taxes would increase \$19,000, or 2.7 percent. They are projected to increase \$24,000 for 25- to 39-year-olds, \$33,000 for those in the top lifetime tax quintile, \$69,000 for those in the top 5 percent of the lifetime tax distribution, and \$148,000 for those in the top 1 percent of the lifetime tax distribution. While lifetime taxes are projected to increase only \$1,000 for adults in the bottom lifetime tax quintile, this increase represents 6.1 percent of their lifetime taxes.

Considering the impact on lifetime income, average lifetime income is projected to decline \$141,000, or 2.8 percent. The youngest adults are expected to lose \$209,000 or 3.3 percent of their lifetime income. Adults in the top quintile will lose \$262,000, or 3.2 percent, and those in the top 1 percent of the distribution will lose more than \$1 million, or 5.5 percent of the lifetime income.

Because this policy option provides a 25 percent matching credit on 401(k) contributions, there will be some winners—mostly adults with lower socioeconomic characteristics (table 8). The 9 percent projected to pay lower lifetime taxes under this scenario will pay \$4,000, or 4 percent, less than what they paid under the baseline. In addition, they will gain \$24,000, or 1.2 percent, in lifetime income.

Without this credit, there would be no winners, and the share of losers would increase significantly (table 9). The 49 percent projected to pay higher lifetime taxes under this scenario will pay \$34,000, or 6.8 percent, more than what they paid under the baseline. In addition, they will lose \$251,000, or 6.2 percent, in lifetime income. Adults in the bottom lifetime tax quintile are projected to pay \$3,000, or 16.3 percent, more in lifetime taxes and to lose \$22,000, or 2.0 percent, in lifetime income. Adults in the top lifetime tax quintile are projected to pay \$74,000, or 6.2 percent, more in lifetime taxes and to lose \$576,000, or 7.5 percent, in lifetime income.

**TABLE 8****Share of Winners and Amount Gained under Option to Eliminate Tax Preference and Give Credit for 401(k) Contributions**

Baseline characteristics	Share (%)	Change in Average Lifetime Taxes		Change in Average Lifetime Income	
		Dollars (000s)	Percent	Dollars (000s)	Percent
<b>All</b>	9	-4	-4.0	24	1.2
<b>Age in 2014</b>					
25–39	13	-5	-4.3	36	1.4
40–54	11	-3	-3.8	18	1.0
55–69	6	-2	-3.6	7	0.6
70+	1	-2	-6.6	4	0.6
<b>Education</b>					
High school dropout	10	-3	-6.8	20	1.4
High school graduate	10	-3	-4.2	20	1.1
College graduate	7	-5	-3.5	35	1.4
<b>Race/ethnicity</b>					
White non-Hispanic	8	-4	-3.9	23	1.1
Black non-Hispanic	11	-3	-4.5	24	1.3
Hispanic	11	-3	-5.2	25	1.4
Asian/Native American	13	-4	-4.0	26	1.3
<b>Years worked</b>					
0–9	8	-2	-6.2	15	1.2
10–34	10	-3	-4.6	18	1.0
35 or more	9	-4	-3.8	30	1.3
<b>Quintile lifetime taxes</b>					
1st	7	-2	-9.9	11	1.1
2nd	14	-2	-8.7	9	0.8
3rd	14	-4	-4.5	22	1.1
4th	9	-7	-3.2	46	1.3
5th	2	-10	-2.1	87	1.5
<b>Top 10% lifetime taxes</b>					
No	10	-4	-4.1	23	1.2
Yes	0	0	0.0	0	0.0
<b>Top 5% lifetime taxes</b>					
No	10	-4	-4.1	24	1.2
Yes	0	0	0.0	0	0.0
<b>Top 1% lifetime taxes</b>					
No	9	-4	-4.0	24	1.2
Yes	0	0	0.0	0	0.0

Source: Dynamic Simulation of Income Model, version 3.

Note: Winners are adults experiencing at least a 1 percent gain in lifetime income taxes.

**TABLE 9****Share of Losers and Amount Lost under Option to Eliminate 401(k) Tax Preference**

Baseline characteristics	Share (%)	Change in Average Lifetime Taxes		Change in Average Lifetime Income	
		Dollars (000s)	Percent	Dollars (000s)	Percent
<b>All</b>	49	34	6.8	-251	-6.2
<b>Age in 2014</b>					
25–39	71	45	6.8	-378	-7.4
40–54	58	29	6.8	-181	-5.1
55–69	31	13	5.7	-57	-2.4
70+	3	8	6.1	-18	-1.2
<b>Education</b>					
High school dropout	28	17	7.1	-131	-5.4
High school graduate	46	27	6.5	-188	-5.5
College graduate	64	47	6.9	-354	-6.8
<b>Race/ethnicity</b>					
White non-Hispanic	51	37	6.5	-256	-5.9
Black non-Hispanic	47	25	8.3	-199	-6.6
Hispanic	42	29	6.8	-250	-6.8
Asian/Native American	48	33	7.8	-291	-7.3
<b>Years worked</b>					
0–9	19	18	6.9	-155	-6.7
10–34	42	22	6.7	-160	-5.2
35 or more	59	41	6.8	-306	-6.5
<b>Quintile lifetime taxes</b>					
1st	11	3	16.3	-22	-2.0
2nd	28	3	14.6	-17	-1.6
3rd	51	8	10.0	-46	-2.6
4th	69	21	9.1	-133	-4.4
5th	85	74	6.2	-576	-7.5
<b>Top 10% lifetime taxes</b>					
No	44	18	9.3	-120	-4.4
Yes	89	106	5.6	-840	-8.2
<b>Top 5% lifetime taxes</b>					
No	47	23	9.1	-160	-5.1
Yes	89	143	4.8	-1,166	-8.6
<b>Top 1% lifetime taxes</b>					
No	49	30	8.3	-217	-5.8
Yes	87	249	3.0	-2,141	-9.3

**Source:** Dynamic Simulation of Income Model, version 3.

**Note:** Losers are adults experiencing at least a 1 percent loss in lifetime income taxes.

## Conclusion

Under existing law, only a small share of tax benefits for retirement saving accrues to those in the bottom half or even the bottom three-quarters of the income distribution. Flattening the benefit schedule could make the opportunities for those currently left out more equal. Given the private retirement system's failure to provide benefits to a significant share of the population, flattening reforms are often considered, but with little quantitative information about their impact. This report attempts to reduce that knowledge gap and to demonstrate not just annual but lifetime effects, as well as generational differences in impact.

The simulations shown here demonstrate how certain generic proposals—further limits on existing contribution levels, expansion of the saver's credit, and conversion of the existing exclusion to a credit—could affect the distribution of tax benefits and lifetime incomes. At the same time, these simulations should be considered as only suggestive. They do not reflect the many behavioral adjustments that might take place, nor do they account for the details of any related legislation that might be required, such as how to limit withdrawals of tax credits soon after contributions are made or how credits for saving can be kept in retirement accounts rather than, as under current law, provided as tax refunds that might be spent right away.

## Appendix A. Methodology

### Short-Run Analyses

Our short-run analyses use the Urban-Brookings Tax Policy Center (TPC) Microsimulation Model. The TPC microsimulation model's primary data source is the 2004 public-use file (PUF) produced by the Statistics of Income (SOI) Division of the Internal Revenue Service (IRS). The PUF is a microdata file that contains 150,047 records with detailed information from federal individual income tax returns filed in calendar year 2004. We obtain additional information on demographics and sources of income that are not reported on tax returns through a constrained statistical match with the March 2005 Current Population Survey (CPS) conducted by the US Census Bureau. Because the income tax data in our model contain no direct information about wealth holdings, we rely on information from the Federal Reserve Board's Survey of Consumer Finances (SCF) to develop imputations for various categories of assets and liabilities for each household in our sample.

The TPC model is well-designed to model distributional effects of tax reforms over a ten-year horizon. For the years from 2005 to 2024, we "age" the data based on Congressional Budget Office (CBO) forecasts and projections for growth in various types of income, CBO and Joint Committee on Taxation (JCT) baseline revenue projections, IRS estimates of future growth in the number of tax returns, JCT estimates of the distribution of tax units by income, and Census Bureau data on the size and age-composition of the population.<sup>3</sup> We use actual 2005 through 2011 data when available.

The TPC model includes imputations for contributions to employer provided pensions and individual retirement accounts, allowing for analysis of retirement tax subsidies. Employer and employee contributions to DC pension plans are based on the distribution of contributions from the SCF adjusted to match aggregate totals from the Department of Labor. Contributions to IRAs are based on data from the PUF as well as the Survey of Income and Program Participation (SIPP). When distributing tax burden, the model accounts for the present value of tax savings associated with contributions to retirement accounts; burden incorporates not only the tax treatment of contribution but also tax-free accrual in subsequent years as well as any taxes ultimately paid on withdrawal.

### Long-Run Analyses

For our long-run analyses, we use the Urban Institute's Dynamic Simulation of Income Model (DYNASIM) to evaluate retirement saving policies for low and middle-income families. The

model starts with a self-weighting sample of individuals from the 1990 to 1993 SIPPs. DYNASIM ages this starting sample in yearly increments to 2087, using parameters estimated from longitudinal data sources. The model integrates many important trends and differentials in life-course processes, including birth, death, schooling, leaving home, first marriage, remarriage, divorce, disability, work, and earnings.

DYNASIM also simulates the major sources of retirement wealth and income. The model projects lifetime earnings; the timing of retirement and Social Security benefit take-up; pension participation, coverage, and wealth (both defined benefit and defined contribution); and wealth accumulation outside pensions. DYNASIM also includes federal and state income tax calculators, along with imputations from SOI PUF of data either missing or underestimated in SIPP. These include income from assets (interest, dividends, and capital gains) and itemized deductions. The tax calculators implement current law tax, including the effects of EGTRRA, JGTRRA, TIPRA, ATRA, the alternative minimum tax (AMT), the taxation of Social Security benefits and pension income, and the saver's credit.

Our baseline tax scenario mostly reflects current tax law, including provisions scheduled to expire in the future. The baseline departs from current tax law in two ways. First, it assumes all price-indexed parameters of the income tax law are indexed to changes in the *average wage* instead of the *price level* beginning in 2023. In the absence of this assumption, real economic growth would eventually lead to much higher future average income tax burdens. We assume in that future Congresses will not permit this to happen.

Our sample includes adults born in 1989 or earlier because they are 25 years or older in 2014. We follow them until 2087 or until they die.

For each simulation, we examine how adults' federal taxes and retirement incomes compare with the baseline. We assume that differences in taxes paid between the baseline and alternative scenarios are invested in stocks and bonds in investment accounts in the same proportion and with the same rates of return as in the 401(k) tax-deferred accounts. We accumulate this account (positive or negative, depending on the simulation) over each adult's lifetime and include it in retirement income.

## Appendix B. DYNASIM Modules

This appendix provides details on the DYNASIM modules directly related to this report. For a fuller description of DYNASIM, see Favreault and Smith (2004) and Smith (2012).

### Retirement Accounts

DYNASIM3 projects retirement accounts based on annual contributions to investment accounts and accumulated investment returns. The model starts with self-reported SIPP retirement account balances. Because of documented deficiencies in the SIPP asset data (Czajka, Jacobson, and Cody 2003; Smith, Favreault, and Cashin 2005), asset balances in retirement accounts (as well as financial assets outside of retirement accounts) in DYNASIM3's starting SIPP sample are adjusted to align with asset distributions from the Survey of Consumer Finances (SCF).

Individuals are also assigned an individual-specific risk tolerance based on SCF data. An individual's share of retirement account assets invested in equities varies by age and risk tolerance, with high-risk and younger individuals investing more in equities than low-risk and older individuals. Every year, DYNASIM3 rebalances the portfolios according to the allocation strategy for the individual's attained age and risk-tolerance categories.

DYNASIM3 uses historical price changes and returns for stocks, long-term corporate bonds, and long-term government bonds through 2010 to grow portfolios. Investment experience varies for each individual because the model sets rates of return stochastically, using historical means and standard deviations. The model accounts for the 2008 stock market crash, which reduced equity values by 37 percent, by assuming that the market recovers to half of its projected pre-crash value by 2017 (Butrica, Smith, Toder 2009, 2010). Specifically, DYNASIM3 assumes a 7.4 percent average real rate of return on stocks from 2011 to 2017 before resuming to its historic average real return of 6.5 percent. Bond portfolios include 40 percent long-term government bonds and 60 percent corporate bonds. After 2010, DYNASIM3 assumes mean real rates of return of 3.5 percent for corporate bonds and 3.0 percent for government bond. Actual annual returns include individual-specific stochastic variance of 17.28 percent for stocks and 2.14 percent for bonds. The 6.5 percent real return on stocks reflects a capital appreciation of about 3.5 percent and a dividend yield of around 3.0 percent, in line with the long-term performance of the S&P 500. These rates of return were recommended by the Social Security Administration's Office of the Chief Actuary for the President's Commission to Strengthen Social Security (2001). The standard deviations are derived from real returns over the 55-year period between 1952 and 2007 for large company stocks and Treasury bills reported in Ibbotson Associates (2011). Inflation assumptions follow the 2012 intermediate assumptions used by the



Social Security trustees (Social Security Board of Trustees 2011). The model subtracts one percentage point from annual stock and bond returns to reflect administrative costs.

DYNASIM3 allows some workers to cash out retirement account balances with job changes or job losses. Younger workers, workers with lower account balances, and workers who lose their jobs are more likely to cash out retirement account balances than are older workers, those with higher balances, and those who move seamlessly from one job to another. High unemployment contributes to lower lifetime DC pension savings through loss of contributions (and returns on lost contributions) when out of work and hardship withdrawals.

## **Financial Assets**

DYNASIM projects financial assets (i.e., stock, mutual fund, and bond values and checking, savings, money market, and certificate of deposit account balances, less unsecured debt) based on historical savings patterns. Initial wealth is based on SIPP self-reports. Then the Panel Study of Income Dynamics (PSID) is used to estimate wealth from the age at the SIPP interview to age 50, the Health and Retirement Study (HRS) is used to estimate asset accumulations from age 51 to retirement, and the SIPP is used to estimate asset spend-down from retirement until death. Because of large differences in individual saving behavior, longitudinal data are vital for estimating wealth changes over time. The PSID is the best source of longitudinal wealth data for younger ages, and the HRS is the best source of longitudinal wealth data for adults near retirement.

DYNASIM projects financial assets using a random-effects model that accounts for the unobserved heterogeneity typical of wealth measures. The model is estimated separately by marital status based on age of household head, race, family size, birth cohort, dual-earner status, pension coverage, and earnings.

## **Taxes**

DYNASIM has the capacity to estimate payroll taxes, as well as state and federal income taxes. The model's tax calculator accurately models current law taxes including EGTRRA, JGTRRA, the AMT, and the taxation of Social Security benefits and pension income. The tax calculator also simulates future tax law. For short-term projections (through 2023), it holds constant the current-law tax rates and adjusts the brackets as appropriate for expected inflation. It holds the Social Security taxation thresholds at their current-law values, since these are not indexed for inflation. Since wages are expected to increase faster than prices, the tax calculator indexes the brackets to wages instead of prices for the long-term projections (after 2023). Doing this will avoid real-bracket creep and prevent the ratio of taxes to gross domestic product from rising

steadily over time. It also continues to hold the Social Security taxation thresholds at their current-law values.

## Notes

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<sup>1</sup> Among households with retirement accounts, the median balance is \$100,000—still unlikely to sustain households through many years of retirement. These estimates may be somewhat low since many retirement account balances had not yet recovered from the Great Recession in 2010.

<sup>2</sup> The president's original proposal reduces the credit from its current maximum of \$1,000 (\$2,000 if married filing jointly) to \$250 (\$500 if married filing jointly). The scenario we model sets the maximum credit at its current-law value.

<sup>3</sup> A two-step process produces a representative sample of the filing and nonfiling population in years beyond 2004. We first inflate the dollar amounts for income, adjustments, deductions, and credits on each record by their appropriate forecasted per capita growth rates. We use the CBO's forecast for per capita growth in major income sources such as wages, capital gains, and nonwage income (interest, dividends, Social Security benefits, and others). We assume that most other items grow at CBO's projected growth rate for per capita personal income. In the second stage of the extrapolation, we use a linear programming algorithm to adjust the weights on each record so that the major income items, adjustments, and deductions match aggregate targets. We also attempt to adjust the overall distribution of income to match published information from SOI for 2004 through 2010 and published estimates of the 2011 and 2012 distributions from JCT. We extrapolate recent trends to obtain projected distributions for years beyond 2012 and modify those distributions in order to hit CBO's published forecasts for baseline individual income tax revenue.

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