

Retirement Savings and Tax Expenditure Estimates

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EXECUTIVE SUMMARY

Tax expenditure estimates for retirement savings provisions should be prepared on a present-value basis. Measuring retirement savings provisions on a present-value basis would help policymakers understand the lifetime tax benefits occurring with respect to retirement savings contributions and would allow an “apples to apples” comparison with tax expenditures such as current deductions and credits.

Each year the staffs of the Congressional Joint Committee on Taxation (JCT) and the Treasury Department’s Office of Tax Analysis (OTA) publish estimates of Federal tax expenditures.¹ Policymakers subject tax expenditures to

special scrutiny, particularly when they are exploring options to increase Federal revenues, so these tax expenditure estimates generate considerable attention with each publication. Policymakers use tax expenditure estimates to identify special tax benefits in the Federal income tax system and to identify possible sources of increased revenues, often targeting the largest tax expenditures as possible sources of revenue raising proposals.

The current method for calculating tax expenditure estimates for retirement savings contributions measures *the difference between current taxes deferred and revenues received from prior-year tax deferrals*. This cash-flow measure is appropriate for deductions or exclusions from income where the tax benefit occurs in the year of the deduction, but it overstates

the value of retirement savings provisions in absolute terms. This method fails to measure the actual tax benefits of retirement savings contributions and, as a result, distorts the size of the retirement saving tax expenditures relative to other tax expenditures.

Retirement savings provisions create two tax benefits – the primary benefit of tax-exempt earnings on retirement savings and a secondary benefit when taxpayers face lower marginal tax rates when taxpayers withdraw retirement savings than the tax rates they faced when contributing to retirement savings.

To measure the correct value of the tax expenditure for retirement savings in a way that makes these provisions directly comparable to other tax expenditures, one should measure the present value of the tax benefits attributable to the current-year retirement saving contributions. This benefit for tax expenditure purposes is the sum of (1) the present value of the tax benefit on future earnings plus (2) the present value of the tax benefit of deferral on the current year contributions.

The following table presents present-value tax expenditure estimates that measure the true tax benefits provided for contributions to

ESTIMATED PRESENT-VALUE TAX EXPENDITURE FOR RETIREMENT SAVINGS, LIFETIME TAX BENEFIT (DOLLAR AMOUNTS IN BILLIONS)		
DEFINED CONTRIBUTION PLANS <i>(includes only private-sector defined contribution and Keogh plans, including 401(k) plan contributions by employers and employees)</i>	ONE-YEAR TAX EXPENDITURE	FIVE-YEAR TAX EXPENDITURE
Tax Benefit of the Deferral	\$16	\$61
Tax Benefit of Future Earnings	\$11	\$54
Total Defined Contribution Plans	\$27	\$115
All estimates assume a 4 percent rate of return on contributions, a 4 percent discount rate, that withdrawals begin at age 65, and that all taxpayers survive until they are 80 years of age.		

¹The JCT submits a report containing these estimates to the House Committees on Ways and Means and Budget and the Senate Committees on Finance and Budget. The OTA includes estimates of tax expenditures in the President’s annual budget submission to the Congress.

defined contribution retirement plans, using an approach that captures the benefit of current contributions over the lifetime of the taxpayers who contribute.

The one-year present-value tax expenditure estimates are 34 percent lower than the JCT one-year estimates and 54 percent lower than the Treasury one-year estimates. Similarly, the one-year present-value tax expenditure estimates are lower than the Treasury one-year present-value estimates by approximately 77 percent.²

In addition, the present-value tax expenditure estimates of contributions made in the first five years are 55 percent lower than the JCT five-year estimates and 75 percent lower than the Treasury five-year estimates.

Measuring retirement savings provisions on a present-value basis for tax expenditure purposes would help policymakers to understand the lifetime tax benefits occurring with respect to “activity undertaken” in the current year. The “activity undertaken” in this case is the retirement savings contributions made in the current year. This would allow an “apples to apples” comparison with tax expenditure estimates for other provisions such as current deductions and credits, which also measure “activity undertaken” in the current year. The present-value estimates for retirement savings provisions capture the effect of the retirement savings contribution, the accumulation of tax-free earnings, and the withdrawal of retirement savings contributions later.

²Present value estimates are very sensitive to assumptions about contribution and withdrawal patterns, discount rates, and assets' earnings rates.

OVERVIEW

³The JCT submits a report containing these estimates to the House Committees on Ways and Means and Budget and the Senate Committees on Finance and Budget. The OTA includes estimates of tax expenditures in the President's annual budget submission to the Congress.

⁴As examples, see *Tax Expenditures: Compendium of Background Material on Individual Provisions*, Committee on the Budget, United States Senate, S. Prt. 106-65, December 2000; *Tax Expenditures Represent a Substantial Federal Commitment and Need to Be Reexamined*, United States General Accountability Office, GAO-05-690, September 2005; *Tax Expenditures: Trends and Critiques*, CRS Report for Congress, Congressional Research Service, RL33641, September 13, 2006; and *Tax Expenditures for Energy Production and Conservation*, Joint Committee on Taxation, JCX-25-09R, April 21, 2009.

⁵Stanley Surrey, then-Assistant Secretary of the Treasury, introduced the concept of tax expenditures in 1967 to identify those provisions in the Federal tax laws that were not necessary to implement the Federal income tax system. *Annual Report of the Secretary of the Treasury on the State of Finances for the Fiscal Year Ended June 30, 1968*, United States Department of the Treasury, 1969.

⁶Since Stanley Surrey first introduced the concept of tax expenditures, academics and policymakers have questioned both the definition of a tax expenditure as well as the identification and measurement of tax expenditures. See, for example, *Tax Expenditures: A Review and Analysis*, Joint Economic Committee, United States Congress, August 1999. This analysis criticizes the fact that the expansive tax base utilized for identifying tax expenditures "institutionalizes a particular bias in the decision making process."

⁷Tax expenditure estimates are often confused with revenue estimates for the repeal of the tax expenditure provisions. Tax expenditure estimates are not equivalent to revenue estimates for a number of reasons, including the fact that they do not consider taxpayer behavioral response. Thus, tax expenditures generally overstate the potential revenue raised from repeal of the tax expenditure provision.

⁸Further, tax expenditures take on greater importance when revenue legislation is subject to a "pay-as-you-go" requirement. A pay-as-you-go requirement necessitates that a revenue-raising proposal accompany any revenue-losing proposal to offset the revenue loss.

Each year the staffs of the Congressional Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) publish estimates of Federal tax expenditures.³ Because people often consider tax expenditures as representing the cost of loopholes in the Federal income tax system, these tax expenditure estimates generate considerable attention with each publication. Congressional Committees, Congressional support organizations, and private organizations release special studies of tax expenditures from time to time, promoting further interest in the size and scope of these provisions.⁴

Retirement savings provisions provide a deferral of tax, rather than an exemption from tax. Current tax expenditure estimates for retirement savings provisions overstate the size of these provisions relative to other tax expenditures because the current method for measuring tax expenditures measures retirement savings provisions on a cash flow basis rather than on a present-value basis.

In theory, tax expenditure estimates represent foregone revenue from certain Federal income tax provisions that provide benefits considered outside the "normal" income tax system.⁵ The Congressional Budget and Impoundment Control Act of 1974 (the Budget Act) defines tax expenditures as "those revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability."⁶

Policymakers subject tax expenditures to special scrutiny, particularly when they are exploring options to increase Federal revenues.⁷ Policymakers use tax expenditure estimates to identify special tax benefits in the Federal income tax system and to identify possible sources of increased revenues, often targeting the largest tax expenditures as possible sources of revenue raising proposals.⁸

Under current methods for measuring tax expenditures, retirement savings provisions appear to be among the largest items in the tax expenditure budget. The JCT estimates that aggregate retirement saving tax expenditures will total nearly \$120 billion in 2011 and will increase to \$174 billion in 2013. As a result, policymakers often scrutinize the tax provisions that encourage retirement savings as a possible means of raising revenues.

Retirement savings contributions are not permanently exempt from tax. Rather, the taxpayer only defers taxes on the contributions and earnings until after the taxpayer retires and withdraws amounts from retirement savings. Thus, *retirement savings provisions provide a deferral of tax, rather than a permanent tax benefit like a current deduction or tax credit*. In the case of provisions (such as retirement savings

Retirement savings provisions create two tax benefits – the primary benefit of tax-exempt earnings on retirement savings and a secondary benefit if taxpayers face lower marginal tax rates when they withdraw retirement savings than the tax rates they faced when contributing to retirement savings.

provisions) that provide a deferral of tax from one year to a later year, the current method for estimating tax expenditures overstates the value of deferral relative to provisions providing permanent tax relief.

In the case of retirement savings provisions, the *current cash-flow method for calculating tax expenditures measures the sum of the taxes that would otherwise be paid on retirement savings contributions made during the year and the tax-deferred earnings on all existing retirement savings plans accrued during the year minus taxes paid on all withdrawals from retirement savings that occur during the year.* This cash-flow measure overstates the value of retirement savings provisions in absolute terms. As the Administration states in its annual budget, “these [cash-based] estimates do not accurately reflect the true economic cost of” providing deferral of tax, rather than a current exclusion or credit.⁹

By not measuring the tax benefit resulting from action taken during the year, the current method treats retirement savings provisions differently from other tax expenditure estimates, which causes the tax expenditure estimates for retirement savings not to be comparable to other tax expenditure estimates. Further, this

method fails to measure the actual tax benefits of retirement savings contributions and as a result, distorts the size of the retirement savings tax expenditures relative to other tax expenditures.

Retirement savings provisions create two tax benefits – the primary benefit of tax-exempt earnings on retirement savings and a secondary benefit if taxpayers face lower marginal tax rates when they withdraw retirement savings than the tax rates they faced when contributing to retirement savings. Measuring the two tax benefits on a present value basis for contributions made during a year provides a fair comparison to other tax expenditure estimates. This approach is similar to the approach utilized by the Treasury Department when they produce their present-value tax expenditure estimates and is consistent with the way that Treasury treats Federal credit programs for Federal budget purposes.

The following analysis examines the traditional JCT and OTA tax expenditure estimates for retirement savings and presents an alternative measure that reflects more accurately the true tax benefit provided for retirement savings provisions under current law.

⁹Refer to Budget of the United States Government, Fiscal Year 2012, Analytical Perspectives, Federal Receipts, Tax Expenditures.

I. TRADITIONAL ESTIMATES OF TAX EXPENDITURES

Tax Expenditure Estimates Are Not Revenue Estimates

The JCT measures tax expenditures as the difference between tax liability under current law and tax liability if the tax expenditure did not exist. Unlike revenue estimates, tax expenditure estimates (1) ignore potential taxpayer behavior, (2) focus on tax liabilities rather than Federal government receipts, and (3) ignore interaction effects with such other Federal taxes as Federal employment taxes.

¹⁰The Congressional Budget and Impoundment Control Act of 1974 (P.L. 93-344) requires the CBO to prepare tax expenditure estimates, but historically, the staff of the Joint Committee on Taxation assumed responsibility for preparing the estimates.

¹¹Refer to *Estimates of Federal Tax Expenditures for Fiscal Years 2009-2013*, Joint Committee on Taxation, JCS-1-10, January 11, 2010, p.1.

¹²Congressional Budget and Impoundment Control Act of 1974, Section 3(3).

¹³*Supra*, at p. 3.

¹⁴A 2010 OECD report discusses the problem of identifying the benchmark tax base for purposes of identifying and measuring tax expenditures. The report cites Dirk-Jan Kraan, who wrote that the choice of a benchmark tax system "is rooted in different views of the normative tax base...[T]he definition of the normative tax base is a very political exercise. For this reason, attempts in the past to define tax expenditures in terms of the normative tax base... have not been very successful." Refer to *Tax Expenditures in OECD Countries*. Organisation for Economic Co-Operation and Development, 2010.

¹⁵See, for example, Kahn, Douglas A. and Jeffrey S. Lehman. *Tax Expenditure Budgets: A Critical View*. 54 Tax Notes 1661, 1992. See, also, Bartlett, Bruce. *The End of Tax Expenditures as We Know Them?* 92 Tax Notes 413, 2001.

¹⁶Weisbach, David A. and Jacob Nussim. *The Integration of Tax and Spending Programs*. 113 Yale Law Journal 955, 2004, at p. 976.

A. IDENTIFYING TAX EXPENDITURES

The Budget Act 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."¹² The legislative history for the Budget Act states that the tax expenditure concept relies on a normal income tax structure.

The Budget Act does not define the concept of a "normal income tax structure." The JCT states, "the decision to classify provisions as tax expenditures is made on the basis of a broad concept of income that is larger in scope than 'income' as defined under general U.S. income tax principles."¹³ For individual income taxes, the JCT staff uses a very broad definition of tax expenditures that includes most tax benefits. In general, the JCT staff treats only the following provisions as part of the normal income tax structure: one personal exemption for each taxpayer and one for each dependent, the standard deduction, the existing tax rate schedule, and deductions for investment and employee business expenses. Thus, the JCT staff treats any other tax benefit for individual taxpayers as a tax expenditure.

One important conceptual issue is whether it is appropriate to use a broad measure of a "normal income tax structure" as the base for tax expenditure calculations.¹⁴ Over the years, academics and others criticized the concept of a "normal income tax structure" as ambiguous.¹⁵ In a recent paper, Professors David Weisbach

The staffs of the JCT and OTA prepare annual estimates of tax expenditures. The Budget Act requires the staffs to prepare these estimates.¹⁰ In their annual report on tax expenditures, the JCT staff says, "tax expenditure analysis can help both policymakers and the public to understand the actual size of government, the uses to which government resources are put, and the tax and economic policy consequences that follow from the implicit or explicit choices made in fashioning legislation."¹¹

Policymakers and the public also need to understand how both the JCT and Treasury tax expenditure estimates are prepared in order to understand (1) the conceptual problems of identifying tax expenditures, (2) the similarities and differences between the JCT and Treasury estimates, and (3) the inherent problems with the current tax expenditure calculations.

and Jacob Nussim argue “there is no such thing as a normative tax base.”¹⁶

Current tax expenditure estimates assume a broad income tax base, but this raises a legitimate question about the appropriate base for measuring tax expenditures. Many academics question whether the appropriate base is a broad income tax base, a consumption tax base, or a hybrid tax base (e.g., a tax base that begins with an income tax, but includes some elements of a consumption tax).¹⁷ Many believe that the current tax system is closer to a hybrid system than a pure income tax system. *Indeed, retirement savings contributions do not fit the tax expenditure definition under a consumption tax base and, arguably, under a hybrid tax base.*

B. JOINT COMMITTEE ON TAXATION AND TREASURY TAX EXPENDITURE ESTIMATES

The JCT and OTA staffs use different methodologies and different classifications of tax expenditures. These differences result in variation in the items treated as tax expenditures and the magnitude of the tax expenditure estimates. In addition, the tax expenditure estimates for the two offices are prepared against different economic baselines

and over different periods. OTA uses the Administration’s economic baseline and the JCT staff uses the baseline prepared by the Congressional Budget Office. JCT presents estimates for 2009 through 2013 while OTA presents estimates for 2009 through 2015.

Both the JCT and OTA staff measure tax expenditures for retirement savings provisions on a cash basis. The JCT staff notes that “the tax expenditure for ‘net exclusion of pension contributions and earnings’ is computed as the income taxes foregone on current tax-excluded pension contributions and earnings less the income taxes paid on current pension distributions (including the 10-percent additional tax paid on early withdrawals from pension plans).”¹⁸ The OTA staff also presents alternative present-value estimates for provisions, such as retirement savings provisions, that result in a deferral of tax.

Table 1 and Table 2 present the most recent cash-flow tax expenditure estimates for retirement savings provisions prepared by the JCT and OTA. Note that JCT and OTA use different ways of categorizing retirement savings provisions and different periods for the estimates.

ITEM	2009 (IN BILLIONS OF DOLLARS)	2009-2013 (IN BILLIONS OF DOLLARS)
Net exclusion of pension contributions and earnings:		
Plans covering partners and sole proprietors (referred to as Keogh plans)	\$ 9.2	\$ 73.4
Defined benefit plans	\$38.4	\$275.7
Defined contribution plans	\$32.6	\$184.3
Individual retirement arrangements:		
Traditional IRAs†	-\$28.0	\$ 40.7
Roth IRAs	\$ 0.1	\$ 18.3
Credit for certain individuals for elective deferrals and IRA contributions	\$ 0.9	\$ 4.7
Source: Joint Committee on Taxation estimates. †The JCT indicates that the IRA tax expenditure in 2009 differs from prior pamphlets because of economic conditions in 2008 and 2009.		

¹⁷ For a more thorough discussion of possible baseline tax systems for tax expenditure measurement, see *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2008*, at p. 313.
¹⁸ *Supra*, at p. 6.

TABLE 2
DEPARTMENT OF TREASURY TAX EXPENDITURE ESTIMATES
FOR RETIREMENT SAVINGS PROVISIONS, 2009-2015

ITEM	2009 (IN BILLIONS OF DOLLARS)	2009-2013 (IN BILLIONS OF DOLLARS)
Net exclusion of pension contributions and earnings:		
Employer plans	\$40.1	\$247.5
401(k) plans	\$44.1	\$360.8
Individual retirement accounts:	\$12.1	\$ 78.9
Low and moderate income savers credit	\$ 1.1	\$ 5.3
Keogh plans	\$12.8	\$ 95.8
Special ESOP rules	\$ 1.7	\$ 10.0

Source: Analytical Perspectives, Budget of the United States Government, Fiscal Year 2011.

OTA also prepares alternative, present-value estimates of certain tax expenditure provisions. Table 3 presents the present-value tax expenditure estimates for retirement savings provisions prepared by the OTA with the 2011 budget. The 2009 present-value calculation for 401(k) contributions is significantly larger than the 2009 traditional tax expenditure estimate. The President’s 2011 budget does not explain how the present value estimates are calculated, but the 2008 budget provides the following explanation:

“The present-value estimates represent the revenue effects, net of future tax payments that follow from activities undertaken during calendar year 2006 which cause the deferrals or other long-term revenue effects. For instance, a pension contribution in 2006 would cause a deferral of tax payments on wages in 2006 and on pension earnings on this contribution (e.g., interest) in later years. In some future year, however, the 2006 pension contribution and accrued earnings will be paid out and taxes will be due; these receipts are included in the present-value estimate.”¹⁹

TABLE 3
DEPARTMENT OF TREASURY PRESENT VALUE TAX EXPENDITURE ESTIMATES FOR
RETIREMENT SAVINGS PROVISIONS

ITEM	2009 (IN BILLIONS OF DOLLARS)
Exclusion of pension contributions – employer plans	\$ 74.3
Exclusion of 401(k) contributions	\$113.0
Exclusion of IRA contributions and earnings	\$ 4.0
Exclusion of Roth contributions and earnings	\$ 11.2
Exclusion of non-deductible IRA earnings	\$ 0.5
Exclusion of contributions and earnings for Keogh plans	\$ 6.3

Source: Analytical Perspectives, Budget of the United States Government, Fiscal Year 2011.

Present value estimates of retirement saving tax expenditures are very sensitive to assumptions

concerning earnings rates, length of deferral, and the timing of withdrawals.

¹⁹ Analytical Perspectives, Budget of the United States Government, Fiscal Year 2008, at p. 290.

C. PROBLEMS WITH CURRENT TAX EXPENDITURE MEASURES

1. Measuring Retirement Savings Tax Expenditures

Measuring all tax expenditures on a cash-flow basis inflates the cost of certain tax expenditures that do not provide a permanent tax benefit. The tax expenditure estimates overstate costs for provisions that defer income taxes compared to those that provide a permanent tax reduction. A current deduction or tax credit permanently reduces the amount of income tax a taxpayer will pay. While a tax deferral provides a reduction in current taxes, taxpayers must include these amounts in taxable income in a later year. Even though the net present value of an item of deferral is less than the value of an equivalent current deduction or credit because of the later inclusion in taxable income, these items receive comparable treatment for tax expenditure purposes.

One way of providing a fair comparison in the tax expenditure estimates is to provide a net present-value measure of the estimates for those provisions that provide a tax deferral, rather than a permanent current tax benefit. In addition to the traditional cash-flow tax expenditure estimates, the OTA prepares annual present-value estimates for selected provisions that provide a tax deferral. The Treasury Department states that “this conceptual approach is similar to the one used for reporting the budgetary effects of credit programs, where direct loans and guarantees in a given year affect future cash flows.”²⁰ Enactment of this present-value treatment of Federal credit programs was to allow a fair comparison of direct loans and loan guarantees for Federal budget purposes. In effect, the treatment allows for an “apples to apples” comparison.

Measuring tax expenditures that provide for deferral on a present value basis and other tax expenditures on a cash basis would enable policymakers to make a similar “apples to apples” comparison for estimates of tax expenditures. The current method of measuring tax expenditures on a cash flow

basis overstates the value of the deferral for pension contributions relative to other tax expenditure provisions. The following section provides a conceptual framework for a more accurate measurement of retirement saving tax expenditures.

2. Measuring the True Cost of Retirement Saving Contributions

The existing tax expenditure calculations for retirement savings arrangements fail to measure the actual tax benefit that occurs. There are two advantages to qualified retirement savings over taxable savings. The primary benefit is the tax-free rate of return on earnings. The secondary benefit is the income tax deferral on contributions and earnings until these amounts are withdrawn.

Tax-Free Rate of Return – Many people do not understand that the primary benefit of qualified retirement savings is a tax-free rate of return on earnings. In the case of Roth IRAs, this effect is obvious. Taxpayers are not entitled to deduct their contributions to a Roth IRA, but the earnings accumulate tax-free. In general, withdrawals from a Roth IRA are not taxable. Thus, the earnings attributable to a Roth IRA are permanently exempt from tax. Although not as obvious, earnings from other types of qualified retirement savings have the same effect. Consider the following example.

Assume that a taxpayer faces a marginal income tax rate of 25 percent and makes a \$2,000 contribution to a qualified retirement savings account, such as a deductible IRA or 401(k). The taxpayer either excludes \$2,000 from income (in the case of a 401(k) contribution) or deducts \$2,000 (in the case of an IRA contribution) and, thus, the initial tax savings on the contribution is \$500 (25 percent of \$2,000). If the taxpayer earns 8 percent interest on the account, after one year, the account is worth \$2,160. If the taxpayer withdraws these amounts (without penalty), the taxpayer pays \$540 of tax (25 percent of \$2,160). The available after-tax amount is \$1,620 (\$2,160 minus \$540).

If the taxpayer instead contributes to a taxable

²⁰ *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2011, supra.*

savings account, then the taxpayer would pay an initial tax of \$500 (25 percent of \$2,000) and the amount available for investment would be \$1,500. After one year (at 8 percent interest), the earnings would be \$120, bringing the account balance to \$1,620. However, the taxpayer would have to pay tax on the \$120 of earnings. Thus, the tax benefit (attributable to the qualified retirement savings contribution) is that the earnings attributable to the contributions are tax-deferred.

Deferral of Tax – A second advantage, related to the deferral of tax on contributions and earnings, occurs if the taxpayer faces a lower tax rate when the qualified retirement savings contributions are withdrawn. In the example above, if the taxpayer faces a 25 percent marginal tax rate when contributions are made and a 15 percent marginal tax rate when the contributions plus earnings are withdrawn, the taxpayer will pay tax of \$324 instead of \$540, thereby increasing the total tax benefit of making the contributions.

Taxpayers can face higher, lower, or equal marginal tax rates when they withdraw their qualified retirement savings. A taxpayer might face higher marginal tax rates if the retirement savings contributions are made earlier in the taxpayer's career when annual income and marginal tax rates are lower. A taxpayer might face lower marginal tax rates if the retirement savings contributions are made later in the taxpayer's career when annual earnings are higher or if the taxpayer receives more retirement income from nontaxable sources, such as Social Security. If taxpayers face higher marginal tax rates, the tax benefit of making the original retirement savings contributions decreases. If they face lower marginal tax rates, the tax benefit of deferral increases. If they face equivalent tax rates upon withdrawal, then there is no advantage to the deferral of tax.

II. ALTERNATIVE TAX EXPENDITURE ESTIMATES

The true tax expenditure cost of retirement savings raises some important issues for calculating tax expenditures. The *current cash-flow method for calculating tax expenditures measures the sum of the retirement savings contributions made during the year and the tax-deferred earnings on all existing retirement savings plans accrued during the year minus all withdrawals from retirement savings that occur during the year.* Yet, this method fails to measure the actual tax benefits of these contributions and can distort the comparison of retirement saving tax expenditures to other tax expenditures. To reiterate, the tax benefits attributable to retirement savings contributions are the *deferral of tax for earnings on the retirement savings and, possibly, the benefit of deferring tax to a time when the taxpayer faces a lower marginal tax rate.*

The OTA present-value calculations for retirement saving tax expenditures are the current year contributions net of the present value of future earnings and withdrawals. This method produces imperfect results because it treats contributions (net of the present value of future withdrawals) as tax expenditures regardless of whether the deferral produces a tax benefit. Thus, the Treasury present-value tax expenditure calculations may overstate the real tax benefit for retirement saving contributions.¹⁸

Theoretically, tax expenditures should measure the actual “tax benefit” that accrues from a special provision of the income tax system. In the case of current deductions and credits, this amount is straightforward to calculate. The current deduction provides an immediate tax benefit when the taxpayer claims the deduction, because the taxpayer does not pay taxes.

In the case of qualified retirement savings contributions, measuring the actual tax benefit becomes more complicated. To measure the value of the tax expenditure for retirement savings in a way that makes these provisions directly comparable to other tax expenditures, one should measure the present value of the tax benefits attributable to the current-year retirement saving contributions. This benefit for tax expenditure purposes is the sum of (1) the present value of the tax deferral attributable to future earnings plus (2) the present value of the tax benefit of deferral on the current year contributions.

A. ESTIMATING TAX EXPENDITURES

As mentioned above, there are two components of the tax expenditure estimate for retirement savings contributions – the tax benefit of the deferral attributable to current-year retirement savings contributions and the tax benefit with respect to future earnings attributable to current-year retirement savings contributions.

In order to capture these benefits correctly, it is important to consider these estimates in present value terms and over the life cycle of the taxpayer. Present-value estimates capture the time value of money.¹⁹ Taxpayers have a life cycle with respect to retirement savings. This life cycle consists of an accumulation phase, when the taxpayer contributes to the account, a possible maintenance phase, during which the taxpayer makes no further contributions, but withdrawals have not commenced, and a withdrawal phase, during which the taxpayer withdraws the accumulated retirement contributions and earnings.

¹⁸ Some variation between the OTA and JCT estimates and those presented in this paper may result from the inclusion of different plan types. Without further detail of the composition of ‘employer plans’ in the Treasury estimates, it is difficult to determine if these various tax expenditure estimates start with the same base of plans.

¹⁹ For purposes of this analysis, the discount rate used for present value calculations is 4 percent (considered by many economists to be the ‘real’ rate of return or the rate that the economy gravitates toward over time).

To capture the life cycle of the taxpayer, the analysis considers the age of the taxpayer contributing to the retirement account. To demonstrate the effects of using both present-value estimates and considering the life cycle of the taxpayer, the analysis considers only contributions to defined contribution plans.²³

Measuring the Tax Benefits of the Deferral –

This analysis distributes current contribution amounts by age as well as income of the taxpayer.²⁴ Distributing taxpayer contributions by age provides a sense of the duration of the contribution phase before withdrawals begin. In all cases, the analysis assumes that taxpayers contribute until they reach 65 years of age. After this point, the analysis assumes that they begin to withdraw amounts until they reach 80 years of age (i.e., over a 15-year period).²⁵ Younger taxpayers have a longer accumulation phase relative to their withdrawal phase. This is consistent with the notion that earlier participation in qualified retirement saving plans provides greater benefits. Conversely, older taxpayers have a shorter accumulation phase relative to their withdrawal phase.

After distributing taxpayers by age and share of retirement contributions, the analysis distributes each age cohort by income class. This characterizes the potential tax benefit of the pension deferral allowing for assumptions about the tax rate that the taxpayer may face during the withdrawal phase. Generally, the analysis assumes that taxpayers would face a lower tax bracket in retirement – one tax bracket lower than the one faced during their accumulation phase for all taxpayers with two exceptions. The analysis assumes that taxpayers in the highest tax bracket would not face a lower marginal tax rate in retirement, but rather would face the same rate and taxpayers in the lowest tax bracket would pay no taxes in retirement.

Measuring the Tax Benefits of Future Earnings

– The tax benefit for future earnings relies on the same distribution of taxpayers (by age and income). Distributing current contributions by age provides an opportunity to capture more accurately the duration of the accumulation

and withdrawal phases. In addition, the analysis distributes the age cohorts by income to apply the tax benefit of these future earnings. The analysis assumes that accumulated amounts would earn a 4 percent rate of return.²⁶

B. A BETTER PICTURE FOR RETIREMENT SAVING TAX EXPENDITURES

Table 4 provides estimates of the tax expenditure for defined contribution plans. The five-year estimates represent the lifetime benefit of the contributions to defined contribution plans made each year in 2010 through 2014. By contrast, the one-year estimate for 2010 represents the lifetime benefit of the contributions made to defined contribution plans during 2010. The estimates include only current contributions and withdrawals associated with those contributions.

The vast majority of the contributions to defined contribution plans are contributions to 401(k) plans. Taxpayers defer approximately \$110 billion in aggregate 401(k) contributions each year. This lifetime analysis distributes these amounts by taxpayer age and income class to determine the present value of the tax benefits that the contributions receive over time – the present value of the tax benefits of the deferral and exemption for future earnings.

For 2010, these estimates depict the lifetime tax expenditure for taxpayer contributions made in 2010; for example, the analysis assumes that contributions made in 2010 for taxpayers 30 years of age or younger would remain in the account for approximately 35 years and would be available for withdrawal in the 36th year. In the case of a 30-year old taxpayer, the tax expenditure estimates represent the estimated present value of 50 years of tax benefits (i.e., until the taxpayer reaches age 80) with respect to the contribution made in the current year. This period considers the present value of the net tax benefit of the deferral over this period as well as the tax benefit of earnings accumulated over the period.²⁷ Alternatively, a person who is 60 years of age will contribute for only five years, but will begin to withdraw those amounts

²³ Defined contribution plans comprise the vast majority of plan assets and 401(k) plans constitute the majority of defined contribution plans. More than 60 percent of all current contributions are to defined contribution retirement plans. A similar analysis theoretically could extend to defined benefit plans, but to simplify the discussion, this analysis presents only defined contribution plans.

²⁴ This analysis relied on data from the Employee Benefits Research Institute's *Pension Investment Report and Accumulation and Distribution of Individual Retirement Arrangements, 2004* by Victoria Bryant of the IRS.

²⁵ Taxpayers will withdraw their retirement savings at different rates. Some will make withdrawals earlier than age 65 and some will defer withdrawals past age 65. For purposes of this analysis, a 15-year withdrawal pattern beginning at age 65 was assumed to be an average rate of withdrawal overall all taxpayers.

²⁶ This rate of return reflects the historical rates of returns over time for private pension plans, taking into account the losses sustained since 2007.

²⁷ Likewise, the analysis assumes taxpayers between the ages of 31 and 40 would work on average 25 years and draw down their assets over 15 years; taxpayers between the ages of 41 and 50 would work on average 15 years and draw down their assets over 15 years, and so on.

after only five years, at age 65. The present-value calculations based on contributions made in 2010 captures the projected timing of

withdrawals with respect to these contributions, based on the age distribution of taxpayers contributing to the plan.

TABLE 4 ESTIMATED PRESENT-VALUE TAX EXPENDITURE FOR RETIREMENT SAVINGS, LIFETIME TAX BENEFIT (DOLLAR AMOUNTS IN BILLIONS)		
DEFINED CONTRIBUTION PLANS	ONE-YEAR TAX EXPENDITURE 2010	FIVE-YEAR TAX EXPENDITURE 2010 – 2014
Tax Benefit of the Deferral	\$16	\$61
Tax Benefit of Future Earnings	\$11	\$54
TOTAL DEFINED CONTRIBUTION PLANS	\$27	\$115
All estimates assume a 4 percent rate of return on contributions, a 4 percent discount rate, that withdrawals begin at age 65, and that all taxpayers survive until they are 80 years of age.		

In addition to the five-year tax expenditure estimates, Table 4 includes the present-value tax expenditure calculation for one year of current contributions. The estimates rely on the same assumptions as the five-year estimates, but instead only capture the tax benefit attributable to contributions during one year.

The one-year present-value tax expenditure estimates are 34 percent lower than the JCT one-year estimates and 54 percent lower than the Treasury one-year estimates. Similarly, the one-year present-value tax expenditure estimates are lower than the Treasury one-year present-value estimates by approximately 77 percent.

In addition, the present-value tax expenditure estimates of contributions made in the first five years are 55 percent lower than the JCT five-year estimates and 75 percent lower than the Treasury five-year estimates.

The difference in these estimates is that this alternate estimate captures the true benefit of the deferral and future earnings. It incorporates the accumulation phase, when taxpayers contribute to a retirement savings account and earnings accumulate, as well as the future withdrawal phase, when taxpayers withdraw amounts in the retirement account.