

Retirement Savings and Tax Expenditure Estimates

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OVERVIEW

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.

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 These tax expenditure estimates generate considerable attention because people often view them as the cost of loopholes in the Federal income tax system. The attention paid to tax expenditures, particularly retirement savings tax expenditures, continues to intensify as policy makers and researchers enter the debate.²

This paper updates a recent Quantria Strategies paper that examined the characterization and measurement of retirement savings provisions as tax expenditures. This paper focuses on two critical issues regarding retirement savings provisions as tax expenditures. First, the paper examines the theoretical rationale for excluding retirement savings provisions from the definition of tax expenditures.

Second, if retirement savings provisions are treated as tax expenditures, the paper explores the proper methodology to measure the value of these provisions. The current methodologies employed by the JCT and OTA do not capture fully the lifetime benefits and tax payments associated with retirement savings provisions. In addition, as with many policy debates, the focus becomes quantifying a **single point estimate** of tax expenditures, but this focus serves only to distract from the policy issues.

In an effort to characterize and clarify these two important issues, this paper strives to provide a better general understanding of tax expenditures as they pertain specifically to retirement savings tax expenditures.

In theory, tax expenditure estimates measure foregone revenue from certain Federal income tax provisions that provide benefits deemed to be outside the "normal" income tax system.³ 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."⁴

¹ The 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.

² 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. As examples, see Munnell, Alicia, Laura Quinby, Anthony Webb, *What's the Tax Advantage for 401(k)s?*, Center for Retirement at Boston College, No. 12-4, February 2012; *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.

³ Stanley 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.

⁴ Since Stanley Surrey first introduced the concept of tax expenditures, academics and policymakers have questioned the definition of tax expenditures 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."

Tax expenditure analysis measures certain provisions relative to a broad-based income tax system. In fact, the current income tax system is a hybrid system of income and consumption taxes. The current treatment of retirement savings, an essential element of this hybrid system, should not be considered tax expenditures.

Policy makers subject tax expenditures to special scrutiny, particularly when they are exploring options to increase Federal revenues through the income tax system.⁵ Policy makers use tax expenditures to identify special tax benefits often targeting the largest tax expenditures as possible sources of revenue raising proposals.⁶

Current tax expenditure analysis assumes that a broad-based income tax system with very few exclusions, deductions, or credits provides an ideal system of taxation. However, the current income tax system provides a hybrid system of taxation with income tax and consumption tax components; this hybrid system is nearly as old as the income tax itself. In fact, the retirement savings provisions of the current-law income tax system provide the most important part of this consumption tax treatment by permitting individuals to defer taxation of retirement savings until the retirement savings are withdrawn. ***Because the treatment of retirement savings is in essence a structural element of the current system, these provisions should not be considered tax expenditures.***

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 \$136 billion in 2012 and will increase to \$206 billion in 2015. As a result, policy makers 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, current law defers the tax on retirement savings contributions and earnings until an individual 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 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.

The current cash-flow method for calculating tax expenditures measures the sum of the taxes otherwise paid on current retirement contributions and the accrued tax-exempt earnings on all existing retirement plans 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.”⁷

By not measuring the total tax benefit, the current (cash-flow) method treats retirement savings provisions different from other tax expenditure estimates, creating tax expenditure estimates for retirement savings that are not comparable to other tax expenditures 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 saving tax expenditures relative to other tax expenditures.

⁵ Tax 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.

⁶ Further, 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.

⁷ Refer to Budget of the United States Government, Fiscal Year 2012, Analytical Perspectives, Federal Receipts, 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.

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—and provides estimates that are more than 50 percent lower than the tax expenditure estimates of the JCT and OTA. This approach is similar to the approach utilized by the OTA when they produce their present-value tax expenditure estimates and is consistent with the treatment of Federal credit programs for Federal budget purposes.

After examining the traditional JCT and OTA tax expenditure estimates for retirement savings, we consider the rationale for including retirement provisions as tax expenditures and present an alternative measure that reflects more accurately the true tax benefit provided for retirement savings provisions under current law.

I. Traditional Estimates of Tax Expenditures

The staffs of the JCT and OTA prepare annual estimates of tax expenditures. The Budget Act requires the staffs to prepare these estimates.⁸ 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.”⁹

Policymakers and the public need to understand how both the JCT and OTA 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 OTA estimates, and (3) the inherent problems with the current tax expenditure calculations.

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.”¹⁰ The legislative history for the Budget Act states that the tax expenditure concept relies on a normal income tax structure.

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.

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.”¹¹ 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 benefits for individual taxpayers as tax expenditures.

⁸ The 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.

⁹ Refer to *Estimates of Federal Tax Expenditures for Fiscal Years 2009-2013*, Joint Committee on Taxation, JCS-1-10, January 11, 2010, p.1.

¹⁰ Congressional Budget and Impoundment Control Act of 1974, Section 3(3).

¹¹ *Supra*, at p. 3.

B. TAX EXPENDITURES AND REVENUE ESTIMATES

Actual tax expenditure estimates differ significantly from revenue estimates. Tax expenditures are a measure of the difference between the tax liability under present law and the tax liability from recalculating taxes without the benefit of the special tax provision. Tax expenditure estimates assume that taxpayer behavior remains unchanged for estimating purposes. This assumption simplifies the calculation and conforms the tax expenditure estimate to budget outlays. However, unlike tax expenditure estimates, all revenue estimates include anticipated taxpayer behavior.

Three features distinguish tax expenditure calculations from revenue estimates. Considering the repeal of a tax expenditure provision, the revenue estimate calculation:

- Incorporates the effects of taxpayer behavioral changes anticipated in response to the repeal of a tax provision;
- considers the short-term timing of tax payments, rather than focusing on changes in the reported tax liabilities of taxpayers;¹² and
- considers changes in such other Federal taxes such as FICA, excise taxes, estate and gift taxes.

In each case, the tax expenditure calculation does not include any of these effects. Consequently, many policymakers mistakenly view repeal of tax expenditure provisions as an indicator of the revenue raising potential. In many cases, the revenue estimate of repealing a special tax provision produces considerably less revenue compared to the tax expenditure estimate, because the

expenditure estimate does not consider these timing effects and behavioral responses of the affected taxpayers.

C. 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 2011 through 2015 while OTA presents estimates for 2011 through 2017.

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)."¹³ 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 the JCT and OTA use different ways of categorizing retirement savings provisions and different periods for the estimates.¹⁴

¹² Revenue estimates incorporate the timing of tax payments based on the Federal government's fiscal years (as opposed to the taxpayer's fiscal year, which conforms to the calendar year in most cases). The revenue estimate for repeal of a provision would show a smaller revenue gain in the first fiscal year than in subsequent fiscal years. Revenue estimates also reflect some delays in the timing of the revenue gains from (1) taxpayer tendency to postpone or forgo changes in tax withholding and estimated tax payments and (2) transition relief not captured in a tax expenditure calculation.

¹³ *Supra*, at p. 6.

¹⁴ Table 2 displays the OTA five-year estimates to provide comparable scoring periods. However, in addition to the differences in categorizing the provisions and scoring periods, the JCT estimates differ from the OTA estimates in a number of ways. Such differences include: (1) JCT assumes the next best tax treatment while OTA assumes complete repeal (and no other favorable treatment), (2) JCT and OTA use different baseline projections as well as different data sources, (3) JCT excludes de minimis provisions; and (4) JCT includes negative tax expenditures.

TABLE 1		
Joint Committee on Taxation Tax Expenditure Estimates for Retirement Savings Provisions, 2011-2015		
ITEM	2011 (IN BILLIONS OF DOLLARS)	2011-2015 (IN BILLIONS OF DOLLARS)
Net exclusion of pension contributions and earnings:		
Plans covering partners and sole proprietors (referred to as Keogh plans)	\$14.2	\$ 78.7
Defined benefit plans	42.7	263.7
Defined contribution plans	48.4	375.9
Individual retirement arrangements:		
Traditional IRAs†	7.3	62.4
Roth IRAs	3.2	24.1
Credit for certain individuals for elective deferrals and IRA contributions	1.0	5.0

Source: Joint Committee on Taxation, JCS-1-12, *Estimates of Federal Tax Expenditures for Fiscal Years, 2011-2015*, January 12, 2012

TABLE 2			
Department of Treasury Tax Expenditure Estimates for Retirement Savings Provisions, 2011-2017			
ITEM	2011 (IN BILLIONS OF DOLLARS)	2011-2017 (IN BILLIONS OF DOLLARS)	2011-2017 (IN BILLIONS OF DOLLARS)
Net exclusion of pension contributions and earnings:			
Employer plans	\$36.4	\$249.7	\$298.0
401(k) plans	53.4	354.0	428.8
Individual retirement arrangements:	12.8	86.1	100.1
Low and moderate income savers credit	1.1	5.4	5.5
Keogh plans	15.0	95.1	112.2
Special ESOP rules	1.5	8.3	9.1

Source: *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2013*

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 2013 Obama Administration budget. The

2011 present-value calculation for 401(k) contributions is significantly larger than the 2011 traditional tax expenditure estimate. The President’s 2013 budget does not explain the present-value estimate calculation, 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.”¹⁵

¹⁵ *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2008, at p. 290.*

TABLE 3 Department of Treasury Present-Value Tax Expenditure Estimates for Retirement Savings Provisions		
ITEM	2009 (IN BILLIONS OF DOLLARS)	2011-2017 (IN BILLIONS OF DOLLARS)
Exclusion of pension contributions – employer plans	\$ 74.3	\$ 82.9
Exclusion of 401(k) contributions	113.0	89.2
Exclusion of IRA contributions and earnings	4.0	1.3
Exclusion of Roth contributions and earnings	11.2	3.6
Exclusion of non-deductible IRA earnings	0.5	0.1
Exclusion of contributions and earnings for Keogh plans	6.3	3.4
Source: <i>Analytical Perspectives, Budget of the United States Government, Fiscal Year 2011</i> and <i>Analytical Perspectives, Budget of the United States Government, Fiscal Year 2013</i>		

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

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

II. Policy Problems with Current Tax Expenditure Measures

A. PROBLEMS WITH CLASSIFYING RETIREMENT PLANS AS TAX EXPENDITURES

Then Assistant Secretary of the Treasury for Tax Policy Stanley Surrey introduced the concept of tax expenditures in 1967. His concept of the tax expenditure was to identify provisions that deviated from a “normal” income tax system. In a 2008 review of tax expenditure analysis, the JCT staff noted that, in the years since 1967, many academics and policy experts have criticized the concept of tax expenditures.¹⁶

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.¹⁷ Over the years, academics and others have criticized the concept of a “normal income tax structure” as ambiguous.¹⁸ In a recent paper, Professors David Weisbach and Jacob Nussim argue, “there is no such thing as a normative tax base.”¹⁹

Current tax expenditure estimates assume a broad income tax base, but this raises a legitimate question about the appropriate base for measuring tax expenditures. Thus, one of the main criticisms of current tax expenditure analysis is the fact that the identification of tax expenditures relies on a concept of a “normal” income tax system that incorporates a very broad definition of an income tax system in which there are virtually no deductions,

exclusions, or credits. Many academics question whether the appropriate base for measuring tax expenditures 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).²⁰

Further, there are inconsistencies in the treatment of provisions as tax expenditures under the current methodology. For example, the JCT staff assumes that a normal income tax system would tax capital gains when they are realized (i.e., when the asset giving rise to the capital gains is sold, exchanged, or otherwise transferred). The JCT staff argues that the rationale for excluding unrealized capital gains from the measure of tax expenditures is one of administrative feasibility; in other words, it would be difficult to measure these unrealized gains on a year-to-year basis.²¹

On the other hand, the JCT staff treats unrealized retirement savings income as tax expenditures. The tax benefit of the deferral of tax on retirement savings income accrues to the individual taxpayer who participates in a retirement savings arrangement. Retirement savings often are invested in assets, such as stocks, that would give rise to capital gains treatment if they were held directly by the individual. If unrealized capital gains are not treated as tax expenditures because it would not be administratively feasible to tax this income

¹⁶ Joint Committee on Taxation, U.S. Congress. *A Reconsideration of Tax Expenditure Analysis*. JCX-37-08, May 12, 2008.

¹⁷ A 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...the 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.

¹⁸ See, 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.

¹⁹ Weisbach, David A. and Jacob Nussim, *The Integration of Tax and Spending Programs*, 113 Yale Law Journal 955, 2004, at. p. 976.

²⁰ 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.

²¹ Id. See p. 6.

for assets held directly by an individual, the same argument applies to assets held through a retirement savings arrangement. Furthermore, in the case of one form of retirement savings, the defined benefit pension plan, a similar argument could be made that it is not administratively feasible to measure the actual tax expenditure benefit that accrues to individual participants each year since these participants do not have a right to any particular assets in the plan, but rather have the right to a future benefit whether or not the assets held by the plan are sufficient to pay those benefits.

The concept of a normal income tax system also presumes that such a system is the ideal method of taxation. As the JCT staff stated in 2008,

“...the ‘normal’ income tax cannot be defended from criticism as a series of ultimately idiosyncratic or pragmatic choices. If tax expenditure analysis is to enjoy broad support, it must be seen as neutral and principled; unfortunately, the ‘normal’ tax satisfies these requirements only in the eyes of those who believe that the ‘normal’ tax accurately captures their personal ideal of a tax system.”²²

According to the current tax expenditure analysis, a normal income tax system does not contain any component of a consumption tax system.²³ However, as Leonard Burman stated in a 2003 paper, “People who favor an income tax also tend to favor the current method of measuring and displaying tax expenditures. Those who would prefer heavier reliance on consumption taxes would favor defining the normal tax as a broad-based consumption tax. Given that the actual income tax is a hybrid system containing many elements of consumption taxation, there is no objective way to resolve this dispute.”²⁴

As Burman notes, the current income tax system provides a hybrid system of taxation that has both income tax and consumption tax

components. Many economists believe that a consumption tax system provides a more theoretically supported system of taxation than a pure income tax system. In fact, the retirement savings provisions of the current-law income tax system provide the most important part of this consumption tax treatment by permitting individuals to defer taxation of retirement savings until the retirement savings are withdrawn. The hybrid nature of the current tax system is nearly as old as the income tax system itself. Thus, one can reasonably ask why a structural element of the current system (taxes on income attributable to retirement savings is deferred until the withdrawn) should be treated as a tax expenditure.

B. PROBLEMS WITH CURRENT TAX EXPENDITURE MEASURES

Even if one assumes that the current, flawed tax expenditure analysis appropriately includes retirement savings provisions, the methodology employed to measure these 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,

²² *Id.* at p. 7.

²³ However, note that the treatment of unrealized capital gains in the current tax expenditure analysis could be considered equivalent to treatment under a consumption tax system.

²⁴ Burman, Leonard E. *Is the Tax Expenditure Concept Still Relevant?* National Tax Journal 56:613, 618, 2003.

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 OTA 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.”²⁵ 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.

C. 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) plan. 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 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-exempt.

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

²⁵ *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2011, supra.*

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.

III. An Alternative Measure of Retirement Saving Tax Expenditures Lifetime Tax Benefits

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-exempt earnings on all existing retirement savings plans accrued during the year minus all withdrawals from retirement savings that occurs during the year. 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 exemption from 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 measure the current year contributions net of the present value of future earnings and withdrawals. This method also 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 OTA present-value tax expenditure calculations may overstate the real tax benefit for retirement saving contributions.²⁶

Theoretically, tax expenditures should measure the actual “tax benefit” that accrues from a 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 LIFETIME TAX BENEFITS

As mentioned above, there are two components of the tax expenditure estimates 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.

²⁶ 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 OTA estimates, it is difficult to determine if these various tax expenditure estimates start with the same base of plans.

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.²⁷ 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.

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.²⁸

Measuring the Tax Benefits of the Deferral

– This analysis distributes current contribution amounts by age as well as income of the taxpayer.²⁹ 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).³⁰ 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.³¹

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.

²⁷ 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).

²⁸ 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.

²⁹ 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.

³⁰ 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.

³¹ This rate of return reflects the historical rates of returns over time for private pension plans, taking into account the losses sustained since 2007.

The vast majority of the contributions to defined contribution plans are contributions to 401(k) plans. Taxpayers deferred approximately \$298 billion in aggregate defined contribution plan contributions in 2009.³² 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 2011, these estimates depict the lifetime tax expenditure for taxpayer contributions made in 2011; for example, the analysis assumes that contributions made in 2011 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.³³ Alternatively, a person who is 60 years of age will contribute for only five years, but will begin to withdraw at age 65. The present-value calculations based on contributions made in 2011 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 Defined Contribution Retirement Plans, Lifetime Tax Benefit (Dollar Amounts in Billions)		
DEFINED CONTRIBUTION PLANS	ONE-YEAR TAX EXPENDITURE 2011	FIVE-YEAR TAX EXPENDITURE 2011 – 2015
Tax Benefit of the Deferral	\$24	\$ 111
Tax Benefit of Future Earnings	\$21	\$ 97
Total Defined Contribution Plans	\$45	\$208
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 29 percent lower than the combined JCT one-year estimates for defined contribution and Keogh plans and 34 percent lower than the combined OTA one-year estimates for 401(k)-type plans and Keogh plans. Similarly, the one-year present-value tax expenditure estimates are lower than the combined OTA one-

year present-value estimates for 401(k)-type plans and Keogh plans by approximately 50 percent.

In addition, the present-value tax expenditure estimates of contributions made in the first five years are 54 percent lower than the JCT estimates and OTA five-year estimates.³⁴

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.

³² This includes employer and employee contributions to defined contribution plans.

³³ 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.

³⁴ The present-value tax expenditure estimates are approximately 54 percent of the JCT and OTA estimates. (JCT five-year estimates are \$375.0 and \$78.7 billion for 401(k) and Keogh plans, respectively. The OTA five-year estimates are \$354 and 95.1 billion for 401(k) and Keogh plans, respectively.) As with the previous comparisons, these figures compare the current estimates with the combined JCT (defined contribution and Keogh plans) and OTA (401(k)-type plans and Keogh plans) estimates. While the categories may not reflect precisely the same plans, this comparison attempts to make the proper association.

IV. Argue the Policy, Not the Numbers

Tax expenditure estimates have an ignoble history; many commentators have criticized both the concept and the methodology for identifying and measuring tax expenditure provisions. With retirement savings provisions, the debate often focuses on the **size of the tax expenditure** estimates, rather than whether retirement savings provisions even should be considered tax expenditures.

The current law definition of tax expenditures presumes that a broad-based income tax system provides an ideal system of taxation. This presumption ignores the fact that: (1) the current system is a hybrid consumption and income tax system that has been in effect nearly as long as the income tax system itself and (2) many economists believe that a consumption tax system provides a more theoretically defensible system of taxation.

In the current hybrid system, retirement savings represents a primary way of creating the consumption tax elements of the system. As a result, treating retirement savings provisions as tax expenditures creates an imbalanced measure of actual tax expenditures. This imbalance is particularly glaring when one considers that the OTA and JCT do not identify unrealized gains on capital assets as tax expenditures. Unrealized capital gains enjoy an analogous period of deferral from tax (while the asset appreciates in many cases) and are subject to tax when sold.

The debate over the size of the tax expenditure estimates for retirement savings

provisions also obscures important points. First, when the debate focuses on the size of the tax expenditures, it often conflates size with issues of fairness or equity. Indeed, provisions that are generally available to broad classes of taxpayers inherently carry larger tax expenditure estimates. In the case of retirement savings policy, the tax expenditure estimates reflect the effectiveness of present law provisions to encourage retirement savings by large numbers of taxpayers. The purpose of the current law provisions is to encourage a social benefit—saving for retirement and retirement security. The size of the tax expenditure estimates for retirement savings suggests that these provisions—through longstanding Federal tax policy—achieve this societal benefit.³⁵ Therefore, focusing **only** on the size of the tax expenditure estimate ignores the benefits of retirement security.

Second, tax expenditure estimates are not comparable to revenue estimates; revenue estimates that alter the tax treatment of retirement savings would take into account the considerable behavioral effects that would occur; thus, the revenue estimates would invariably be lower than the tax expenditure estimates. Therefore, arguing that pension tax expenditure is “too large” ignores the behavioral response to eliminating them—and the potential deterioration of retirement security.

Third, tax expenditures are a very specific policy tool—one that identifies provisions that deviate from a “normal” income tax system. This policy tool simply allows comparison

³⁵ While not a central focus of this research, it is important to recognize that retirement savings represent a significant source of capital investment in the United States. Changes in the tax treatment that discourage individuals from saving for retirement will have ripple effects that could adversely affect the U.S. economy. As a result, attention more appropriately should focus on the importance of retirement savings not only to retirement income security for the millions of Americans who participate in retirement savings, but also to the overall health of the U.S. economy.

between different provisions as they might deviate from this normal income tax definition. As mentioned, when the definition of the normal income tax system is in question, the effectiveness of the concept of tax expenditures as a policy tool diminishes greatly.

Finally, many policymakers and policy analysts use tax expenditure estimates as an indicator of fairness or equity within the tax system. Tax expenditures do not measure nor address equity or fairness issues. Using them as such uses the wrong tool for this analysis.

This paper addressed two critical issues regarding retirement savings provisions. First, the paper examined the theoretical rationale for excluding retirement savings provisions from the definition of tax expenditures—arguing that tax expenditures should not identify pension

provisions as tax expenditures, because they represent a structural element of the current system. Second, the paper suggests that, if tax expenditure estimates include retirement savings provisions, an appropriate methodology should be used to measure the value of these provisions.

The current methodologies employed by the JCT and OTA do not capture fully the lifetime benefits and tax payments associated with pension provisions. By not capturing accurately these benefits, the policy debate focuses on quantifying a single point estimate of tax expenditures and ultimately distorts the policy debate.

APPENDIX A – Sensitivity of the Estimates to Assumptions

Despite the fact that many policymakers compare the various pension tax expenditure estimates, these estimates often are not comparable or rely on very different assumptions. The estimates are sensitive to the underlying assumptions. The following list provides examples of the estimates' sensitivity to certain key variables:

- **Discount Rate** – Selecting the appropriate discount rate will influence the magnitude of the estimates. This study used a 4 percent discount rate. However, increasing the rate to 6 percent would decrease the estimates by approximately 20 percent (or decreasing to 2 percent would increase the estimates by approximately 25 percent).
- **Rates of Return on Earnings** – The tax expenditure estimates depend upon the long-term rate of return that the contributions might earn. The tax expenditure estimate increases as the assumed long-term rate of return increases. Clearly, higher interest rate assumptions increase the benefit of the tax deferral.
- **Tax Rates** – There are a number of issues related to the choice of tax rates. One issue is the tax rate associated with taxpayers while they are actively contributing to retirement savings arrangements (and deferring tax). The other issue is the tax rate associated with taxpayers at the time of withdrawal. For example, taxpayers subject to low tax rates while contributing may not be subject to tax in retirement. Alternatively, taxpayers may face a lower rate of tax in retirement than the rate faced while working. Therefore, the relative magnitude of these assumed rates will influence the ultimate tax expenditure estimate.
- **Demographics** – Related to the tax rate assumption is the underlying demographics of the plan participants. If one assumes the contributors are younger taxpayers, the deferral period will increase. As the deferral period increases, so does the tax expenditure estimates. Therefore, selecting appropriate demographic assumptions will help depict accurately the tax benefits of the deferral on contributions and earnings on those contributions.