Distribution of Retirement Tax Benefits Estimation Methodology

We define the tax benefit of retirement savings as the present value of the increase in after-tax income (or equivalently, consumption) generated by saving in a tax-preferred account relative to what the taxpayer would receive by saving in a fully taxable account.

We estimate the tax benefits of the saver's credit, as well as the tax benefits of the four types of tax-preferred retirement savings: (a) Roth IRAs and defined contribution (DC) plans (mostly 401(k) plans), (b) traditional IRAs and DC plan accounts, (c) defined benefit pension plans, and (d) nondeductible IRAs. Under the tax code, individuals may be able to contribute to any of these accounts and employers may contribute to traditional DC plan accounts and to defined benefit plans. Our calculation uses the actual amount of money (as estimated from tax, survey and macroeconomic data) allocated by each taxpayer to each type of tax-preferred account in the year of contribution.

As summarized in the table below, all or a portion of contributions to traditional IRAs and DC accounts and to defined benefit pension plans are exempt from income and payroll taxes. In contrast, none of the contributions to Roth IRAs and DC accounts are exempt from income and payroll taxes.

	Individual Income Taxes	Payroll Taxes
Roth IRA or DC account		
Contributions	Not Exempt	Not Exempt
Distributions	Exempt	Not Applicable
Traditional IRA or DC account		
Employer Contributions	Exempt	Exempt
Employee Contributions	Exempt	Not Exempt
Distributions	Not Exempt	Not Applicable
Defined Benefit Plan		
Employer Contributions	Exempt	Exempt
Employee Contributions	Not Exempt	Not Exempt
Distributions	Part attributable to employee contributions exempt	Not Applicable
Nondeductible IRA		
Contributions	Not Exempt	Not Exempt
Distributions	Part attributable to contributions exempt	Not Applicable

All undistributed, accumulated earnings in the above four types of tax-preferred savings accrue tax-free. In contrast, regular savings vehicles yield earnings that are taxable, but sometimes under preferential terms. Interest on regular savings accounts and regular dividends are taxable as they accrue, but tax on capital gains may be deferred until the gains are realized. In addition, while interest is taxed at ordinary income rates, dividends and capital gains are taxed at preferentially low rates. For the sake of analytical simplicity, we abstract from these details and assume that the alternative to a tax-preferred savings account is a savings account that pays interest that is fully taxable at ordinary rates. We also assume the tax is paid out of the account, rather than by reducing current consumption. Under these assumptions, retirement accounts grow faster than taxable accounts.

While contributions to Roth accounts are taxable, distributions from these accounts are not. If tax rates are constant throughout life, the benefit of the tax-exempt distribution is the same as the benefit of making tax-exempt contributions to traditional accounts, for a given amount of pre-tax contributions. (In other words, the main benefit of all of these tax-preferred accounts is that earnings are tax-free.)

For each of the four types of tax-preferred retirement accounts, we calculate the tax benefit of a single year's contribution to the account. The tax benefit is measured as the increase in consumption in retirement allowed by contributing the saving to the tax preferred account compared to contributing it to the fully taxable account. This increase in consumption is discounted back to the year of the contribution. In our methodology, the benefits from existing savings in tax-preferred retirement accounts are ignored. Thus, individuals who are retired in the current year are assumed to receive no benefits from tax preferences for retirement savings because they make no contributions to tax preferred retirement savings accounts. Instead, the benefit of the increase in consumption is counted, in present value terms, in the year that the contribution is made.

We assume that the amount of pre-tax saving is fixed, and does not depend on the availability of tax-preferred retirement accounts. As a result, an elimination of the four types of tax-preferred retirement savings accounts would lead to a decrease in future consumption rather than a decrease in current consumption. However, by the same assumption, eliminating the saver's credit would result in a decline in current rather than future consumption. In other words, the tax benefit of the saver's credit is equal to its current value, in the year of the contribution.

We also utilize the following assumptions:

- Savings and accumulated earnings in retirement accounts, whether tax-preferred or taxable, are only used for consumption in retirement, which is assumed to be 65. Thus, the single year's contribution grows (without withdrawals) until the taxpayer reaches age 65. The length of this accumulation period varies from taxpayer to taxpayer, depending on the taxpayer's age when he made the contribution.

- Upon reaching retirement, we assume that the taxpayer begins to draw down his or her accumulated savings to finance consumption. For simplicity, we assume that withdrawals each year are in an amount determined by the size of the annual fixed annuity that could be paid between age 65 and the taxpayer's expected date of death. The fixed annuity is not adjusted for inflation and the taxpayer's mortality is age and gender dependent. Earnings on balances remaining in tax-preferred retirement accounts continue to accumulate at the pre-tax rate of return.

- The value of employer contributions to retirement accounts is included in the calculation. The burden of payroll and individual income taxes rests with employees so the elimination of tax incentives for retirement savings leaves total compensation paid by employers to employees, which includes employer payroll taxes, unchanged. Hence, employer contributions to a tax-preferred savings account or plan would, in the absence of tax preferences, be paid out as wages and savings in a taxable account would be lower by the amount of individual income taxes and employer and employee payroll taxes paid.

- Pre- and post-retirement, all individuals have a constant discount rate and a constant rate of return on savings. We assume that both the individual discount rate and the rate of return are equal to the current Second Segment Rate published monthly by the IRS.

- Each individual is assigned a fixed marginal income tax rate, which is given by his or her statutory marginal income tax rate in the year of the contribution, and does not change as he ages.