What's the Tax Advantage of 401(k)s?

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Tax reform is high on the nation's agenda. While Republicans and Democrats may disagree about the extent to which tax increases should be part of the deficit reduction effort, they generally agree that a broader base and lower rates for the federal income tax would promote fairness and boost economic growth. The base-broadening discussion inevitably raises the question of cutting back on some "tax expenditures." These expenditures are revenue losses attributable to provisions of the tax laws that are designed to support particular activities. A prime example is the provisions that encourage retirement savings. It seems like a good time to understand the nature of these expenditures, determine how the revenue losses are calculated, think about how tax reform could affect the value of these provisions, and speculate how changes might affect participation and contributions in tax-advantaged savings vehicles, particularly 401(k) plans.

The Conventional 401(k)

Retirement saving conducted through 401(k) plans is tax advantaged because the government taxes neither the original contributions nor the investment returns on those contributions until they are withdrawn as benefits at retirement. If the saving were done outside a plan, the individual would first be required to pay tax on his earnings and then on the returns from the portion of those earnings invested. Deferring taxes on the original contribution and on the investment earnings is equivalent to receiving an interest-free loan from the Treasury for the amount of taxes due, allowing the individual to accumulate returns on money that he would otherwise have paid to the government.

The Roth 401(k)

Since 2006, employers have had the option of offering a Roth 401(k). Under this arrangement, initial contributions are not deductible. But investment earnings accrue tax free and no tax is paid when the money is withdrawn. This arrangement is superior to saving outside a plan because no taxes are ever paid on the returns to investments.

Conventional and Roth 401(k)s Offer Virtually Identical Tax Benefits

Although the conventional and Roth 401(k)s may sound quite different, in fact they offer virtually identical tax benefits. Unfortunately, the easiest way to demonstrate this point is with equations. Assume that t is the individual's marginal tax rate and r is the annual return on the assets in the 401(k). If an individual contributes \$1,000 to a conventional 401(k), then after n years, the 401(k) would have grown to $\$1,000(1+r)^n$. When the individual withdraws the accumulated funds, both the original contribution and the accumulated earnings are taxable. Thus, the after tax value of the 401(k) in retirement is $(1-t)\ \$1,000(1+r)^n$.

Now consider a Roth 401(k). The individual pays tax on the original contribution, so he puts

(1-t)\$1000 into the account. (Note the original contribution in this case is smaller than for the conventional 401(k).) After n years, these after-tax proceeds would have grown to $(1+r)^n$ (1-t) \$1,000. Since the proceeds are not subject to any further tax, the after-tax amounts under the Roth and conventional plans are identical:

Conventional   Roth

$(1-t)\ \$1,000\ (1+r)^n = (1+r)^n\ (1-t)\ \$1,000$

Of course, the preceding exercise assumes that the tax rate that people face in retirement is the same as that when they are young. If their tax rates decline after retirement when they withdraw the funds, then they will pay less tax and have more after-tax income with the conventional 401(k) than with the Roth. If tax rates rise in the future to cover the deficits in the budget forecasts, then today's workers will face higher taxes in retirement and will have more after-tax income with a Roth 401(k) plan than with a conventional one. But for most people, changes in tax rates before and after retirement are not that significant, so the tax treatment of the two types of 401(k) plans can be viewed as identical.