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An Analysis of the Roth 401(k)

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Introduction

The Roth 401(k), a new type of employee 401(k) contribution option, went into effect on January 1, 2006.[1] It bears essentially the same relation to the traditional 401(k) as the Roth individual retirement account bears to the traditional IRA. In both cases, the Roth vehicle does not allow tax deductions for contributions and does not tax the eventual withdrawal, whereas the traditional vehicle features tax-deductible contributions and taxable withdrawals.

This report describes the Roth 401(k) and discusses its potential effects. We find that the Roth 401(k) option will add complexity for employees and employers with little collateral social gain. The Roth 401(k) is unlikely to induce significant new private saving; almost all of the benefits are likely to accrue to high-income and wealthy taxpayers who are able to shift existing taxable assets into tax-favored savings plans. Moreover, the Roth 401(k) will increase the amount of resources that taxpayers can shelter and thus will likely have a negative effect on long-term federal budget revenue.

In short, the Roth 401(k) would complicate savings choices, induce little to no new private saving, and could actually reduce long-term national saving. Those are exactly the wrong directions for public policy. We discuss alternative policies in the conclusion.

Basic Roth 401(k) Rules

While the existing 401(k) employee contribution is "pretax" — excludable from income for federal income tax purposes when made, but subject to tax (together with related earnings) when distributed from the plan — Roth 401(k) contributions would be "after-tax" — includable in income when made. When distributed from the plan, however, the contributions and all accumulated earnings on those contributions are excludable from income if the account has been open for at least five years and the participant is at least 59½ years old (or is deceased or disabled).[2]

Employers are now permitted, but not required, to offer a Roth 401(k) option. Roth 401(k) contributions are subject to the same nondiscrimination, withdrawal, and vesting standards as traditional 401(k) contributions. Unlike traditional 401(k) plans, however, there are no effective minimum requirements for withdrawing funds.[3] If a Roth 401(k) is offered, the annual employee contribution limits would apply to the combination of pretax and Roth 401(k) contributions (for 2006, $15,000 for those younger than 50 years old and $20,000 for older workers).

Complexity

The Roth 401(k) further complicates the already confusing world of retirement planning for workers and firms, and creates obstacles to policies that could simplify retirement saving, like the expansion of automatic features in 401(k) plans.

For workers, the primary challenge is deciding how to allocate contributions and withdrawals (of less than the full account balance) to Roth or traditional accounts. In principle, those are enormously complex decisions, involving expectations of future tax rates and other factors. It is sometimes asserted that Roth accounts are better than traditional IRAs or 401(k)s for lower-income households because they can expect their income and hence their marginal tax rates to rise over the course of their careers. In fact, apart from the uncertainties affecting any given household, predictions of the overall direction of tax rates often rest on questionable assumptions (for example, about whether the applicable marginal rates will rise in the future to reduce the budget deficit or

[1]Section 617(a) of the Economic Growth and Tax Relief Reconciliation Act (EGTRRA), Public Law 107-16, 115 Stat. 38, added section 402A to the Internal Revenue Code of 1986, as amended (the code). EGTRRA also provides for a Roth 403(b) for not-for-profit organizations, but does not provide for a Roth version of the section 457 deferred compensation plans offered to government employees.

[2]Ordinary income tax and, in some instances, an additional 10 percent tax will apply to earnings on contributions that are distributed without meeting the requirements for a "qualified distribution."

[3]Roth 401(k) distributions must begin by April 1 after reaching age 70½, but Roth 401(k)s can be rolled over tax free to a Roth IRA, which is exempt from any age-related withdrawal requirements.

decline under a future consumption tax approach that exempts most or all savings from taxation). That alone may well cause many workers to ignore the Roth option and stay with the traditional 401(k), but the extra complexity is not harmless. Research shows that the existence of too many choices may in fact discourage participation in retirement accounts completely.[4] In addition, the decisions involved also suggest that affluent households, who are more accustomed to engaging in relatively complex financial planning, will have significantly higher takeup of the Roth 401(k) option than others.

The Roth 401(k) will also make plan administration more difficult. For tax purposes, employee Roth contributions and earnings must be tracked separately from employee pretax contributions and earnings. Employers will need to decide whether to make matching contributions for employee Roth contributions. Plan communications to employees about 401(k) rules and options will need to become significantly more involved (including matters like the differences in Roth versus traditional tax treatment and the prohibitions on rollover of Roth 401(k)s to traditional IRAs or traditional 401(k)s).

Roth 401(k)s may also hamper the spread of automatic features in 401(k) plans. Automatic enrollment and other automatic features seek to promote retirement saving through simplifying choices.[5] But a plan sponsor would need to decide, before implementing automatic enrollment, to what extent the automatic contributions would be designated as pretax versus Roth contributions. Requiring employees to choose may defeat the purpose of automatic enrollment. The plan sponsor would effectively be making a bet on future income and tax treatment for employees whose circumstances vary from one household to the next — a bet the plan sponsor knows some employees might second-guess. This may reduce employer interest in those plans.[6]

Finally, it is worth noting that under current law all Roth 401(k)s would expire at the end of 2010. Because it is unclear whether the Roth 401(k) will be extended beyond 2010, some plan sponsors may be hesitant to invest resources in setting up and marketing the plan.[7]

Private and National Saving

There are four key elements to addressing the effects of Roth 401(k)s on private and national (the sum of public and private) saving. The sum total of those effects is that the Roth 401(k) option is likely to have little positive effect on private saving and could reduce national saving.

First, Roth 401(k)s are likely to be used disproportionately by affluent households who are likely to be attracted to the associated estate planning possibilities. Because the Roth IRA is exempt from the rules requiring taxable distributions to begin after age 70½, it permits wealthy individuals to pass on IRA assets to their heirs. However, married couples with incomes exceeding $160,000 and individuals with incomes exceeding $110,000 have been unable to take advantage of that exemption because they are ineligible to contribute to Roth IRAs. In a sense, the Roth 401(k) provides an end run around those income eligibility limits because it is not subject to any income limit and can be rolled over tax-free to a Roth IRA.

In addition, Roth IRAs are likely to be used disproportionately by higher-income households because of the complexity noted earlier, which will make the option unattractive to less financially savvy consumers. Even when middle- or lower-income households do take the trouble to compare the traditional and Roth 401(k) options, they are likely to prefer the traditional option. Roth 401(k)s would be more attractive than traditional 401(k)s if one expected future tax rates to be higher than current ones. However, middle- and lower-income households tend to save less than they need to maintain their preretirement living standards in retirement.[8] Hence they are likely to face relatively low income, and thus relatively low tax rates, in retirement. For someone in that situation, a traditional 401(k) is more attractive than a Roth because the withdrawals would be taxed at a relatively low rate.

Second, contributions to tax-preferred saving accounts by high-income households tend to represent asset-shifting or tax sheltering, rather than net additions to savings. The evidence generally suggests that higher-income households are more likely to substitute existing assets or saving that would have been done anyway into tax-preferred vehicles, rather than reducing their current consumption to finance their deposits, as lower-income households more often tend to do.[9]

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[4]Shlomo Benartzi and Richard Thaler, "How Much Is Investor Autonomy Worth?" 57 *Journal of Finance* 1567-1591 (August 2002).

[5]William G. Gale, J. Mark Iwry, and Peter R. Orszag, "The Automatic 401(k): A Simple Way to Strengthen Retirement Savings," Retirement Security Project Discussion Paper No. 2005-1, March 2005.

[6]In addition, the Roth 401(k), as an after-tax contribution, would complicate the decision an employer must make on choosing the default contribution rate in an automatic enrollment plan. Because it is after-tax, a Roth 401(k) contribution consumes a larger share of an employee's current resources than a pretax contribution of the same nominal amount.

[7]The uncertainty may help explain the January 2005 Hewitt Associates survey in which only 6 percent of plan sponsors said that they were "very likely" to adopt a Roth 401(k).

[8]Eric M. Engen, William G. Gale, and Cori E. Uccello. "The Adequacy of Household Saving," *Brookings Papers on Economic Activity* 2: 65-188.9 (1999).

[9]*See* Eric M. Engen and William G. Gale, "The Effects of 401(k) Plans on Household Wealth: Differences Across Earnings Groups," The Brookings Institution, August 2000; Eric M. Engen, William G. Gale, and John Karl Scholz, "The Illusory Effect of Saving Incentives on Saving," 10(4) *Journal of Economic Perspectives* 113-38 (Fall 1996); Daniel Benjamin, "Does 401(k) Eligibility Increase Saving? Evidence From Propensity Score Subclassification," Mimeo, London School of Economics, 2001; Gary V. Engelhardt, "Have 401(k)s Raised Household Saving? Evidence From the Health and Retirement Survey," Aging Studies Program Paper No. 24, Center for Policy Research, Maxwell School of Citizenship and Public Affairs, Syracuse University (June 2001); James Poterba, Steven Venti, and David Wise, "Do 401(k) Contributions Crowd Out Other Personal

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Third, affluent households already tend to be saving adequately for retirement.[10] Thus, to the extent that the Roth 401(k) option is being used mainly by higher-income households, it is poorly targeted toward those who need it most, regardless of whether it actually has an effect on retirement saving overall.

The first three elements imply that Roth 401(k)s are unlikely to stimulate much in the way of new private savings, and to the extent that they do, it will likely be among groups that are already saving adequately. We now turn to the fourth key element in analyzing the effects of Roth 401(k)s — their effect on government revenues.

As previously discussed, a traditional 401(k) allows a deduction for contributions and taxes the withdrawals. That reduces current government revenue but raises future revenue. In contrast, for traditional backloaded plans, contributions are not deductible but withdrawals are not taxable. Thus, a widespread shift from traditional pretax 401(k) contributions to Roth 401(k) contributions would have nontrivial budgetary implications.

Besides changing the timing of tax preferences, the Roth 401(k) also increases the total amount of tax sheltering that can occur. Although the *statutory* contribution limits are the same for Roth and traditional contributions, the *effective* limits are higher for Roth 401(k)s. For example, a hypothetical worker in a 33 percent tax bracket who contributes $15,000 to a traditional 401(k) has really sheltered only $10,000. The other $5,000 (33 percent of $15,000) is effectively a prepayment of future tax liabilities. In contrast, if the same worker placed $15,000 in a Roth 401(k), the entire amount and associated earnings could be withdrawn tax-free on retirement.

As a result, selection of a Roth 401(k) in lieu of a traditional 401(k) not only shifts revenues to the present by mortgaging future revenues, it does so at very unfavorable terms for the government. In particular, the selection reduces the present value of future revenues by more than it increases the present value of short-term revenues.

A more detailed example helps illustrate the point. (Table 1 on the next page).[11] Suppose Sally contributes $10,000 to a zero-balance traditional 401(k) this year (and makes no other contributions in any other year) and that the $10,000 balance doubles over the next 10 years thanks to compound interest. Suppose also that Sally faces a constant 35 percent tax rate and has $3,500 in a taxable interest-bearing account.

If she keeps the traditional 401(k) and cashes it out after 10 years (after she has reached 59½ years of age), she will withdraw $20,000 and keep $13,000 after paying $7,000 (35 percent of $20,000) in taxes. She would also have a total of $5,520 in her taxable interest-bearing account (assuming for consistency that the pretax rate of return for that account is the same as for the 401(k) and the taxes due on the interest each year are paid out of the interest earned).[12] Her after-tax wealth would be $18,520.

Suppose instead that she contributed the $10,000 to a Roth 401(k) and paid taxes of $3,500 (35 percent of the 401(k) balance). The tax payment would exhaust her taxable interest-bearing account. But her Roth 401(k) balance would be $20,000 after 10 years, which could be withdrawn tax-free. Thus, by selecting the Roth 401(k) over the traditional 401(k), Sally's after-tax wealth would be $20,000, an increase of $1,480.

The effect of the Roth 401(k) selection on government revenues is the opposite — if Sally keeps $1,480 more, the government receives $1,480 less.[13] In present-value terms, the $1,480 is worth $740. That represents 21 percent of the actual tax paid at the time of the contribution. Put differently, every dollar of revenue paid now through this plan costs the government 21 cents in present value. That is, it reduces the present value of future revenues by $1.21. That cost would rise if the holding period were longer, interest rates were higher, the time-constant tax rate was higher, or if tax rates were expected to rise in the future.[14]

Saving?'' 58(1) *Journal of Public Economics* 1-32 (September 1995); and James Poterba, Steven Venti, and David Wise, ''How Retirement Saving Programs Increase Saving,'' 10(4) *Journal of Economic Perspectives* 91-112 (Fall 1996).

[10]Eric M. Engen, William G. Gale, and Cori E. Uccello, ''The Adequacy of Household Saving,'' *Brookings Papers on Economic Activity* 2: 65-188.9 (1999). Alan Gustman and Thomas Steinmeier, ''Effects of Pensions on Saving: Analysis With Data From the Health and Retirement Study,'' NBER Working Papers: 6681 (1998); B. Douglas Bernheim and John Karl Scholz, ''Private Saving and Public Policy,'' in *Tax Policy and the Economy,* vol. 7, edited by James Poterba (Cambridge and London, MIT Press 1993).

[11]Leonard E. Burman, William G. Gale, and Peter R. Orszag, ''The Administration's Savings Proposals: Preliminary Analysis,'' *Tax Notes*, Mar. 3, 2003, p. 1423.

[12]The pretax rate of return required to double asset balances over 10 years is 7.2 percent. Thus, the posttax return on the taxable interest-bearing account would be 4.7 percent = ((1-.35)*7.2). The result reported in the text occurs because $\$3{,}500*(1.047^{10}) = \$5{,}520$.

[13]The net decline in government revenues has several components. First, the government receives $3,500 immediately on contribution to the Roth 401(k), but forgoes $7,000 in revenues in year 10 that would have been forthcoming had Sally kept the traditional pretax 401(k). Those two items net to zero in present value terms. (By assumption, the rate of return is such that asset balances will double over the decade. As a result, the present value of the $7,000 loss in year 10 is equal in magnitude and opposite in sign to the present value of the $3,500 revenue gain in year 0.) Second, because Sally pays taxes on the amount she contributes to the Roth 401(k) with taxable assets, the government forgoes future tax revenue from those balances. That reduces revenues by $1,480 (the difference between the $7,000 balance the assets would have generated at the pretax rate of return and the $5,520 they generate at the posttax return).

[14]The example illustrates the point that one can shelter more funds (reduce overall taxes) by contributing a given amount to a Roth rather than a traditional 401(k). Although in the particular example shown, Sally ends up with more overall retirement wealth with a Roth 401(k) than with a traditional 401(k), that should not be interpreted to mean that Roth 401(k)s raise saving relative to traditional 401(k)s. Sally could, for example, reduce other wealth accumulation (not shown in the example) in response to the higher after-tax balance in her Roth compared with a traditional 401(k).

Table 1		
	Traditional 401(k)	Roth 401(k)
Starting Balance		
Tax-Preferred Account	$10,000	$10,000
Taxable Interest-Bearing Account	$3,500	$0
Tax Paid	$0	$3,500
Year 10		
401(k) Pretax	$20,000	$20,000
401(k) Post-tax	$13,000	$20,000
Taxable Interest-Bearing Account	$5,520	$0
Total Post-tax	**$18,520**	**$20,000**

Policy Alternatives and Conclusion

The Roth 401(k) threatens to do more harm than good. As policymakers, plan sponsors, and service providers work to encourage retirement savings by making the process easier for those without the time or inclination to grapple with the complex choices that would otherwise be involved, the Roth 401(k) works at cross-purposes. It will add another layer of complexity to the choices and information employees already have to deal with.

At the same time, it is unlikely to boost private saving very much, if at all, because it is likely to be used predominantly by financially savvy, affluent households who have the resources to finance the Roth 401(k)s with other forms of saving. For the same reason, it is unlikely to improve the adequacy of households' saving for retirement. Unfortunately, because of the likely anemic impact on net private saving, the Roth 401(k) could reduce national saving. The Roth 401(k) increases the available limit on funds that can be tax-sheltered, hence reducing long-term federal revenues.

Perhaps with those factors in mind, Rep. Benjamin Cardin, D-Md., recently introduced legislation that seeks in part to repeal the Roth 401(k).[15] Four policy proposals, portions of which are considered in the aforementioned legislation, would make it easier to save and increase the incentives to save among those middle- and lower-income workers whose investments are most likely to represent new savings.

The automatic 401(k). Currently, under most 401(k)-type plans, employees choose whether to participate, how much to contribute, how to invest, and what to do with assets when leaving an employer. Having to make each of those choices represents a potential obstacle to robust retirement savings. Policymakers should recognize workers' propensity toward inertia — especially when faced with complex choices that often discourage workers from choosing to participate in a 401(k) — and use it to encourage rather than hinder retirement savings. To that end, policymakers should encourage employers to change the default setting at each step of the retirement savings process so that each step is pro-saving; employees are automatically enrolled in the plan, their contribution rate automatically escalates over time, their contributions are automatically invested in appropriate savings vehicles and, at the end of employment, the plan balance is automatically rolled over to an IRA or a new employer's plan.[16]

The split refund. For many Americans, their tax refund is the single largest payment received all year. That refund represents a valuable opportunity to save, considering that about $200 billion in tax refunds are issued each year. Currently, the IRS permits refund recipients to identify a single destination for refunds. Many have called for the IRS to allow refund recipients to split their refunds to facilitate saving in the same way that most payroll systems let employees split their paychecks and deposit part in savings products. Allowing taxpayers to split their refund — depositing a portion in a retirement account while retaining a portion as liquid assets — would make saving significantly easier. The IRS also has the authority to implement a split refund option without legislative action, but has not done so. Because a split refund option clearly would facilitate saving, policymakers should work to make more immediate changes.[17]

The saver's credit. The saver's credit, enacted in 2002, is the first progressive tax credit designed to encourage retirement saving. The credit offers a 50 percent, 20 percent, or 10 percent tax credit for middle- and lower-income workers for contributions up to $2,000. Unfortunately, the credit is scheduled to sunset in 2006. Furthermore, the credit is nonrefundable. That means that, although the credit is intended to provide incentives for middle- and lower-income workers to save, many of those workers are unable to receive the maximum benefit available and others are unable to receive any benefit at all. To remedy this, policymakers should work to extend the credit and make the credit refundable. That change would increase the incentive to save for those middle- and lower-income workers for whom the law is intended.[18] Policymakers should also consider providing

[15] The Pension Preservation and Savings Expansion Act of 2005 (H.R. 1961).

[16] Gale et al., "Automatic 401(k)," *supra* note 5.

[17] This section draws on J. Mark Iwry, "Using Tax Refunds to Increase Savings and Retirement Security," forthcoming. *See also* Peter R. Orszag and Eric Rodriguez, "Retirement Security for Latinos: Bolstering Coverage, Savings and Adequacy," Retirement Security Project Policy Paper No. 2005-7, July 2005.

[18] William G. Gale, J. Mark Iwry, and Peter R. Orszag, "The Saver's Credit: Expanding Retirement Savings for Middle- and

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eligible taxpayers with an election to either use the credit to offset their tax liability or have it deposited to a qualified retirement plan.

Asset tests in means-tested benefit programs. The asset rules in means-tested benefit programs are outdated for today's retirement savings system. When those tests were originally instituted, most workers could expect pension benefits to be their primary source of retirement income. IRAs and 401(k)s were supplementary to pension benefits and therefore were treated as assets that were available to applicants and that could be liquidated and spent before needs-based benefits could be collected. Now the majority of individuals' primary source of retirement income comes from personal saving or a defined contribution plan.[19] Asset tests treat retirement saving in a confusing and arbitrary way, and policymakers should modify those outdated asset tests so that low-income workers can build retirement saving and retain them until retirement without forfeiting the ability to receive temporary assistance at times when they are out of work or when income falls short of necessary expenses. To do this, IRAs and 401(k) accounts should be exempted when asset tests are applied.[20]

As noted, the Roth 401(k) would complicate saving choices, induce little to no new private savings, and could actually reduce long-term national saving. Those are exactly the wrong directions for public policy. Those four proposals are significantly more likely than the Roth 401(k) to simplify the retirement saving process and boost private and national saving by better targeting those saving for those who need to save more to maintain their living standards in retirement.

Lower-Income Americans,'' Retirement Security Project Discussion Paper No. 2005-2, March 2005.

[19]Merrill Lynch, *Retirement Preparedness Survey 2004.*

[20]Zoe Neuberger, Robert Greenstein, and Eileen Sweeney, ''Protecting Low-Income Families' Retirement Savings,'' Retirement Security Project Discussion Paper No. 2005-6, June 2005.