

Discussion of "Who Uses the Roth 401(k), and How Do They Use It?"
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This is an interesting paper that offers empirical evidence on the role of Roth 401(k) plans in the saving decisions of U.S. workers. Roth 401(k)s first became available in 2001, but uncertainty about whether the legislation that permitted them would expire in 2010 initially slowed their diffusion. In 2006, tax legislation made them permanent. This paper explores the experience of a small group of large firms that adopted Roth 401(k) plans between 2006 and 2010. The notable findings include: the take-up rate for Roth 401(k)s has been quite slow; age and income have modest predictive power in explaining Roth 401(k) participation, but much remains unexplained; the fraction of income contributed to a 401(k) plan is surprisingly insensitive to whether it is a Roth or a regular plan; and inertia appears to play an important role in the choice between regular and Roth 401(k) plans. Each of these findings is informative and is likely to stimulate follow-on research.

The paper begins by discussing the choice problem facing an individual who has access to both a regular and a Roth 401(k). The problem is an extended version of the standard asset location problem, in which an individual must choose between saving in a taxable and a tax-deferred account. When both a Roth and a regular 401(k) are available, the individual must choose how much to save in each tax-deferred account. Corner solutions are possible -- contributing to only one type of account -- as are solutions that involve some "diversification" through contributions to both accounts. The paper explains that even when an individual chooses to direct all of her contributions to a Roth 401(k), any employer matching contributions must be placed in a regular 401(k). This means that anyone choosing the "Roth only" strategy at a firm with matching contributions is *de facto* diversified. There is an upper limit on the amount that can be contributed to either a Roth or a regular 401(k). That limit is \$17,500 in 2013, and it is the same for both regular and Roth 401(k)s.

The authors describe the standard "Roth-vs.-regular" argument that is found in the financial advice press, which focuses on the relationship between a potential contributor's current marginal tax rate and her expected marginal tax rate in retirement. If a potential contributor believes that her tax rate will be higher in the future than today, then contributing to a Roth 401(k) dominates contributing to a regular 401(k) because paying tax on the contributed income today rather than on the account withdrawals in the future will probably result in a higher net-of-tax payout when the account is drawn down in retirement. While theoretically correct, in practice it may be difficult for an individual to reliably predict her future tax rates.

Several factors contribute to this difficulty, particularly for those who are several decades from retirement. First, there are individual-specific uncertainties associated with the lifetime income trajectory. This includes both uncertainties about the amount that will be earned from wages and potentially from investments at different ages, and uncertainty about the age of retirement at which drawdown of retirement accounts is likely to begin. Most individuals experience substantial variation from year to year in their earnings. This translates into variation in marginal income tax rates, although given the relatively broad income classes that map into marginal tax rates in the U.S. tax code, there is less variation in tax rates than in earnings.

Second, complex tax provisions that affect an individual's tax rate both while working and while retired can make the tax rate comparison quite difficult. While working, for example, whether an

individual qualifies for the Earned Income Credit (EIC) can have a substantial effect on her marginal income tax rate. Contributions to a regular 401(k) plan are excluded from the income measure that determines EIC eligibility, while contributions to a Roth 401(k) are not. The choice of plan could therefore affect EIC benefits for some low and moderate income taxpayers. In 2013, a married couple with two children could receive some benefit from the EIC until their wage income exceeded \$48,378. Thus a married individual with wages of \$49,000 could contribute \$2,000 to a regular 401(k) and potentially receive a tax benefit from the EIC as a result. The total credit in this case would be 0.20×1378 , or \$275.

There are also complex tax provisions that may apply when the taxpayer is taking withdrawals from a 401(k) account. One example involves the rules that determine the tax treatment of Social Security benefits. The share of a taxpayer's Social Security benefits that is included in a taxable income depends on modified adjusted gross income (MAGI), which is the sum of various income flows. Depending on the taxpayer's circumstances, receiving an additional dollar of non-Social Security income can expose 50 or 85 cents of Social Security income to taxation, or it may not affect the tax treatment of Social Security income at all. For taxpayers who are in the 15 percent marginal income tax bracket, the potential taxation of a larger share of their Social Security benefits when they receive additional non-Social Security income can generate an effective marginal tax rate of 22.5 percent (1.5×15), 27.75 percent (1.85×15), or 15 percent. For many taxpayers who are still years or decades from retirement, predicting whether their post-retirement income will subject them to these higher marginal tax rates is very difficult. The choice between a Roth and a regular 401(k) can also affect the tax regime that a retiree faces. Roth 401(k) payouts are not included in modified AGI, while regular 401(k) payouts are.

Finally, tax reform creates another source of uncertainty about future tax rates. The U.S. experienced substantial tax reforms in 1981, 1986, 1993, 2001, and 2013. Significant reforms can have substantial impacts on marginal tax rates. Burman, Gale, and Weiner (1998) calculate the change in marginal tax rates on labor income for households between 1980 and 1995. Primarily as a result of the tax reforms of 1981 and 1986, more than half of all taxpayers experienced marginal tax rate reductions of more than ten percentage points, and over 70 percent experienced declines of at least five percentage points. The uncertainty created by tax reform supports the argument that taxpayers may wish to pursue a diversified strategy with respect to their use of Roth and regular 401(k)s.

The difficulty that a taxpayer faces in predicting her future tax rate, in the face of potential legislative changes, can be illustrated by reflecting on current tax reform discussions. Reports by organizations such as the Congressional Budget Office regularly point to a long-term fiscal gap facing the United States: revenues are projected to fall short of expenditures over horizons of fifty and seventy-five years. One might conclude that this implies a substantial likelihood of higher tax rates in the future, which would enhance the value of a Roth 401(k) relative to a regular 401(k). But that presumes both that the fiscal gap is closed by raising revenue rather than cutting spending, and that the additional revenue is raised via higher tax rates. There are other ways to raise revenue. One possibility is a broadening the tax base while keeping marginal rates constant or even reducing them. This scenario might make a regular 401(k) more attractive ex post than a Roth 401(k). Another option might be a shift toward a value added tax (VAT). If a VAT were adopted at a high enough rate to make it possible to lower existing income tax rates, then the regular 401(k) would once again look more attractive ex post than the Roth 401(k) since the taxes are paid at withdrawal, when income tax rates might be lower than they are today. A Roth 401(k) contributor, in contrast, would have paid tax on the amount contributed to the account at high current tax rates, and would then pay VAT -- just as regular 401(k) contributor would -- when the funds were withdrawn.

There are aspects of the choice between Roth and regular 401(k)s that are difficult to integrate with the comparison of current and future tax rates. A particularly important one is that Roth 401(k) holders are exempt from the required minimum distribution rules that apply to regular 401(k)s. This makes it possible for Roth account holders to accumulate for longer in a tax-deferred setting than their regular 401(k) counterparts. Recent proposals for limits on the total value of an individual's qualified plan assets might also make Roth 401(k)s more attractive than regular 401(k)s, because the taxes have already been paid on the former and this permits a higher level of retirement consumption to be supported by a given account balance.

One of the most intriguing findings in the paper is that the share of pay contributed to a 401(k) plan seems to be insensitive to whether the plan is a Roth or a regular 401(k). This is surprising because the amount of retirement consumption that can be purchased with a Roth 401(k) balance of a given amount is greater than the corresponding consumption flow from the same balance in a regular 401(k) account. This finding may be related to the recent report by Chetty, et al (2012) that Dutch workers appear insensitive to the amount that their firms contribute to employer-sponsored defined contribution plans, in the sense that they do not appear to reduce their own contributions to self-directed plans when employers contribute more. Card and Ransom (2009) find something similar in their study of retirement contributions by U.S. academics. They discover that faculty members who work at universities that require larger employee contributions to their defined contribution pension programs choose to contribute less to their voluntary retirement saving plans than colleagues at other universities with a higher employer contribution, but lower employee contribution. This suggests that some type of "mental accounting" may be affecting the perception of these two sources of retirement contributions, even though they both have the same ultimate effect on retirement preparation.

The authors raise the possibility that because the fraction of pay contributed the plan seems insensitive to whether it is a Roth or a regular plan, and Roth contributors pay more in taxes, that contributing to a Roth 401(k) rather than a regular 401(k) is associated with lower consumption and a higher saving rate. While this may be the case, it is difficult to draw this conclusion from only the data at hand. There are many margins other than consumption on which an individual might adjust to a higher tax bill associated with a Roth rather than a regular 401(k) contribution. These include changing contributions to a regular or a Roth IRA, altering a spousal contribution to a retirement plan, changing non-401(k) saving, or borrowing more with a mortgage or other debt instrument. The lack of data on choices with regard to these other margins is an important reminder of one of the difficulties associated with administrative record data on 401(k) plan participants. While providing precise detail on activities within the 401(k) plan, the administrative record data base does not include information on other aspects of the household balance sheet.

A second very interesting finding is that those who contribute to Roth 401(k)s are also likely to contribute to a regular 401(k). This appears to be "tax regime diversification," just what many financial planners recommend. The finding is likely due in part, but not completely, to the fact that employer matching contributions to a Roth 401(k) are deposited into a regular 401(k). But assuming, as the authors conclude, that at least some of those who are contributing to both Roth and regular 401(k)s are doing so by design, one might consider two potential interpretations of this pattern. The first is that it reflects a rational decision to spread one's retirement income across tax regimes, thereby purchasing some insurance against adverse movements in future tax rates. The second is that it is the result of naïve participant behavior. There is some evidence, for example in Benartzi and Thaler (2007), that

some workers use a 1/N heuristic in choosing investment options in 401(k) plans. In the context of plans that offer both Roth and regular 401(k)s, this could appear as diversification.

One direction that the authors might explore in future work concerns the behavior of limit contributors. Consider the choice between a Roth 401(k) and a regular 401(k) for an individual who wishes to fund the highest possible level of retirement consumption using tax-deferred accounts. This individual would be comparing a limit contribution to a Roth 401(k) and a limit contribution to a regular 401(k). While both account types face a \$17,500 limit in 2013, the taxes have already been paid on the amount in the Roth account. In T years, the amount of net-of-tax spending that can be supported by a \$17,500 contribution to a regular 401(k) is $(1+r)^T(1-t_r)*17500$, where t_r is the marginal tax rate that applies to withdrawals. In contrast, a limit contribution to a Roth 401(k) will support future consumption of $(1+r)^T*17500$. Thus the Roth limit contribution effectively delivers $(1+r)^T*t_r*17500$ of additional retirement consumption. The retirement consumption maximizer who can afford the taxes and contributions associated with a Roth limit contribution would therefore choose a Roth account, even if her tax rate was expected to remain constant or even to drop slightly in retirement. The behavior of limit contributors may provide another opportunity to distinguish between alternative models of 401(k) contributor decision-making.

References

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