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ROTH IRAS VERSUS TRADITIONAL IRAS: IMPLICATIONS FOR INDIVIDUALS AND GOVERNMENT

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This policy brief summarizes the impact of traditional individual retirement accounts and Roth individual retirement accounts on personal choices and on government finances. Although the accounts are equivalent under certain circumstances, in practice they often differ in important ways for both individuals and the government.

Individual retirement accounts (IRAs) provide a significant portion of retirement income for many households. But they have two different forms, with varying rules regarding taxes, withdrawals, and other factors (Internal Revenue Service 2018). Traditional IRAs, created in 1974, are "front loaded." Contributions to the account are tax deductible, but withdrawals are taxable. In contrast, Roth IRAs, created in 1997, are "back loaded." Contributions are made with after-tax income, but withdrawals are generally not taxed. In both types of accounts, earnings on assets accrue tax free. In 2017, almost 44 million households owned at least one type of IRA, and many held both: 35 million owned a traditional IRA and 25 million owned a Roth IRA. At the end of 2016, traditional IRA balances totaled $6.9 trillion, and Roth IRA balances totaled $700 billion (Holden and Bass 2018; Holden and Schrass 2017, 2018). The accounts offer taxpayers both a valuable opportunity for tax-subsidized saving and a convenient vehicle to accept rollovers from 401(k)s and other defined-contribution retirement plans.

INDIVIDUAL CHOICES

In a very simple model where (1) tax rates never change, (2) investors contribute the same amount of after-tax dollars, and (3) the IRA balance is distributed before death and not subject to early-withdrawal penalties or required minimum distribution (RMD) rules, traditional IRAs and Roth IRAs are equivalent from the investor's perspective. In the real world, however, the variation in tax rates over time and other differences in rules can affect a person's optimal choices. Further, behavioral biases such as myopia and loss aversion may cause taxpayers to make suboptimal choices.

If tax rates do not change and early-withdrawal penalties do not apply, investment income accrued within both Roth IRAs and traditional IRAs is effectively tax free over the life of the account. This is obvious for Roth IRAs, because earnings on the accounts and withdrawals are never subject to income tax. But it's also true for traditional accounts, because the up-front tax deduction effectively represents the government's share of the individual's investment. The remaining portion is tax-free, just like with Roth accounts. From the investor's perspective, the value of the initial tax deduction and any subsequent earnings on that amount is a kind of tax reserve account that grows at the same rate as the overall asset. If the tax rate does not change and early withdrawal penalties do not apply, this balance will exactly equal tax liability on withdrawal. If tax rates are higher in retirement than during the contribution years, a person would be better served with a Roth IRA; if they are lower in retirement, a traditional IRA would be optimal.

The Role of Contribution Limits

The annual contribution limits on Roth IRAs and traditional IRAs are equal: in 2018, individuals could contribute up to the lesser of taxable compensation or $5,500 ($6,500 for those over age 50) to all their IRAs combined. However, the *effective* contribution limits (i.e., the amounts of future retirement consumption that a person can shelter) are unequal. Contributing a given amount to a Roth IRA generates larger future after-tax consumption than contributing the same amount to a traditional IRA because the latter faces income taxes upon withdrawal. Therefore, investors can effectively contribute (or shelter returns) more with a Roth IRA than with a traditional IRA. The difference in effective contribution limits can be large. For example, under a 33.3 percent marginal income tax rate, Roth IRAs allow investors to shelter returns from 50 percent more contributions than traditional IRAs allow.

Insurance Properties

Roth IRAs provide insurance against future tax rate uncertainty (Brown, Cederburg, and O'Doherty 2017; Burman, Coe, and Gale 2001). Assuming early withdrawal penalties do not apply, Roth IRA withdrawals face a tax rate of zero, regardless of what happens to future tax rates. In contrast, the effective tax rate on traditional IRAs can be positive or negative depending on whether the tax rate on withdrawal is greater or less than the tax rate on contributions. The net after-tax rate of return on a traditional IRA is thus uncertain. Consequently, risk-averse taxpayers may prefer a Roth IRA even if their expected tax rate in retirement is lower than during their working years because the expected after-tax rate of return in the traditional IRA is not high enough to compensate for the uncertainty.

However, traditional IRAs have a countervailing feature. Under a progressive income tax system, traditional IRAs provide a kind of insurance against future income uncertainty (Brown, Cederburg, and O'Doherty 2017). Marginal tax rates on traditional IRA withdrawals will tend to be lower if retirement income is lower (and tax rates will be higher if income is higher). That is, even if the statutory income tax rate structure stays constant over time, a person's marginal tax rate can change if income changes. By cushioning the effects of high or low returns, the traditional IRA reduces the variation in after-tax retirement income, providing a kind of income insurance.

The relative valuation of these two effects varies across investors. Some households may choose to hold both types of account as a way to diversify risk.

Other Factors

Both types of account restrict eligibility based on income and impose penalties for early withdrawals, but the rules differ for each. Further, traditional IRA owners must make annual withdrawals (RMDs) starting by April 1 of the year in which they turn 70-and-a-half. These required minimum distribution rules are designed to ensure taxpayers do not indefinitely postpone income tax liability. The rationale behind this different treatment is that income taxes on Roth IRAs contributions were paid at the time of the contribution, whereas taxes on traditional IRA contributions are not paid until withdrawal. RMDs require that some tax will be paid during most account holders' lives. However, RMDs also limit the duration of tax-free accruals for traditional accounts more than for Roth IRAs, which need not be closed until after the account holder dies. Parallel tax treatment would require withdrawals from Roth IRAs on the same schedule as traditional IRAs.

Empirical Evidence

Several empirical patterns are consistent with the economic incentives outlined earlier regarding early withdrawal penalties and RMDs (Holden and Bass 2018; Holden and Schrass 2017, 2018). First, owners and contributors to Roth IRAs are generally younger than their counterparts for traditional IRAs. Second, among those who are too young to be affected by the RMDs, those who withdraw funds from a Roth IRA are generally younger than those who withdraw from a traditional IRA. Third, among those in age groups affected by the RMDs that apply to traditional IRAs but not Roth IRAs, withdrawal rates for traditional IRAs are much higher. Other studies have found similar results (Brown, Poterba, and Richardson 2017; Mortenson, Schramm, and Whitten 2019).

FISCAL IMPLICATIONS

Federal policymakers are sometimes attracted to Roth IRAs because these back-loaded accounts seem to improve government finances (relative to traditional accounts) within the 10-year budget window that is used for official scorekeeping. Nevertheless, a policymaker with a long view should prefer traditional IRAs to Roth IRAs for several reasons.

First, Roth IRAs shift most of the revenue losses into the future. If policymakers are myopic, this will tend to enable more spending or lower taxes in the near term and thus create higher debt over time. Likewise, shifting to a Roth IRA reduces the future tax base and thus undermines the government's ability to raise future revenue through income tax increases. That is, a shift from traditional IRAs to Roth IRAs is effectively a form of borrowing that does not show up in short-run budget numbers but will exacerbate our already-unsustainable long-term budget situation.

For example, as part of his 2014 tax reform plan, former representative Dave Camp (R-MI) proposed prohibiting contributions to traditional IRAs and eliminating the income limits on contributions to Roth IRAs, among other provisions. The entire retirement account proposal would have increased revenues by more than $200 billion in the first 10 years, and it helped make the overall tax plan revenue neutral within the budget window (Joint Committee on Taxation 2014; Nunns, Eng, and Austin 2014). A similar idea to cap traditional IRA and 401(K) contributions (thus shifting more contributions into Roth accounts) was floated in late 2017 as a way to lower the 10-year cost of the Tax Cuts and Jobs Act, but it was ultimately left out of the final legislation.[1]

Second, even absent other changes in taxes and spending, the improvement in the 10-year budget window from shifting to Roth IRAs does not generate a long-term budget gain because (a) assuming constant tax rates, the long-run impact on the federal budget of a given after-tax contribution to either account will be the same, and (b) the effective contribution limits associated with any statutory limit on Roth accounts are significantly higher than those on traditional IRAs. As a result, expanding Roth accounts at the expense of traditional accounts reduces the present value of long-term federal tax revenue (because some people contribute the maximum amount), even as doing so raises revenue within the 10-year window.

Third, traditional IRAs provide the government an indirect, decentralized way to reap returns from investments in stocks and other risky assets that diversify risk and may pay higher rates of return on average than government bonds without having to own those assets. Traditional IRAs make the federal government a silent partner in the investments held in the

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[1] Chris Arnold, "Republicans Could Affect Americans' Retirement by Targeting 401(k) Plans," *All Things Considered*, October 23, 2017; and Heather Long, "The Final GOP Tax Bill is Complete. Here's What's in it." *Washington Post,* December 15, 2017.

IRA account. This is not a particularly efficient way for the government to invest in equities; the government could in principle optimize its portfolio and save on investment fees if it could invest in equities directly (Landoni and Zeldes 2018). For individual investors, the difference in returns between equities and bonds reflects an equity premium—a fair price to compensate for the additional risk. However, the federal government has risk-pooling options not available to individual investors. In particular, the government may diversify assets over time, and it is much less likely to face binding credit constraints than individuals. This would imply a smaller risk premium. But direct government investment in equities may not be desirable or feasible for several reasons, so having the government be a silent partner through traditional IRAs may be a second-best option for diversifying the government's asset portfolio.

CONCLUSION

Policymakers have long been drawn to Roth IRAs accounts because they seem to be a painless way to raise revenue. Given policymakers' myopia, however, a shift to Roth IRAs in fact produces an illusory stream of short-term revenues that enables bigger tax cuts or more spending, and this will exacerbate our long-run fiscal imbalance. Traditional IRAs allow the federal government to indirectly invest in stocks and other risky assets, thereby diversifying and possibly earning a higher return. It is an inefficient way for the government to invest, but it might be the only practical way for the government to do so.

On the other hand, Roth IRAs are better for many individual investors. Other factors held equal, an investor will favor Roth IRAs if he or she (1) wants to shelter more income per dollar deposited in the account from tax than can be sheltered using a traditional IRA, (2) expects to face higher tax rates in retirement than during working years or simply wants to eliminate uncertainty about how withdrawals will be taxed, or (3) wants to maximize tax-free accruals before bequeathing the assets at death.

Future research should focus on measuring taxpayers' responses to various IRA features using administrative data from the Internal Revenue Service. For example, the theory discussed above and by Burman, Gale, and Krupkin (2019) provides several empirical implications that could be tested with microeconomic data on tax returns.

Although this discussion has focused on IRAs, most of the issues apply to Roth 401(k), 403(b), and 457 plans as well. Because the contribution limits on those accounts are much higher, their fiscal implications are even larger.

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