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CAN RETIREES BASE WEALTH WITHDRAWALS ON THE IRS' REQUIRED MINIMUM DISTRIBUTIONS?

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Introduction

As 401(k) plans have largely replaced traditional pensions, baby boomers have become the first generation that must decide how much of their savings to spend each year in retirement. Boomers must find a strategy that best balances the risk of outliving their wealth against the cost of unnecessarily restricting their consumption.[1]

This *brief*, which is adapted from a recent paper, explores the possibility of basing withdrawals on the Internal Revenue Service's rules for Required Minimum Distributions (RMD) for 401(k)s and IRAs. The analysis compares an RMD strategy with existing rules of thumb and with a pattern of optimal withdrawals.[2]

The discussion proceeds as follows. The first section details the rules of thumb, including the proposed RMD strategy. The second section defines an optimal strategy, which serves as a benchmark for comparing the rules of thumb. The third section provides the results of this comparison. The fourth section suggests a way to modify the RMD strategy to bring it closer to the optimal. The final section concludes that the RMD strategies offer retirees a reasonable trade-off of the benefits and risks inherent in spending down one's retirement savings.

Rules of Thumb for Asset Drawdown

People adopt rules of thumb for drawing down their assets because rules are relatively simple to follow. This section describes the traditional rules of thumb and then discusses the potential for an RMD strategy.

Traditional Rules of Thumb

Three traditional rules of thumb include relying on the investment earnings produced by the assets, calculating withdrawals based on life expectancy, and adopting the so-called "4-percent rule."

Spend interest only. Some retirees use the straightforward strategy of leaving the principal in their retirement accounts untouched and spending only the dividends on stocks and the interest on bonds or certificates of deposit. This strategy can work for wealthy individuals, but has serious drawbacks for people who lack substantial retirement savings. One disadvantage is that, when they die, they will leave behind all of their initial wealth *plus* capital gains. This strategy may be desirable for those who want to leave a bequest, but in other cases it unnecessarily restricts retirement consumption.

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Another drawback to the "interest only" strategy is that a retiree's income – and consumption – are dictated by his asset allocation. The retiree then runs the danger that the tail (the desire to consume) may begin to wag the dog (investments), resulting in a portfolio allocation that does not minimize the risk for any given level of expected return on the portfolio. That is, the retiree may over-invest in dividend-yielding stocks, losing the benefits of portfolio diversification.

Base withdrawals on life expectancy. A second draw-down strategy used in retirement is to spend all financial assets over one's life expectancy, as predicted by life tables. The equation for calculating annual withdrawals under this strategy is:

$$\textit{Annual withdrawal} = \frac{r}{1-(1+r)^{-t}} \; x \; \textit{wealth}$$

where r is a risk-free interest rate on the investments and year t is the remaining life expectancy.

This strategy has two significant drawbacks. First, the above equation is not a simple calculation for most people. Second, retirees face a high probability – a 50-percent chance – that they will outlive their savings and be forced to rely solely on Social Security.

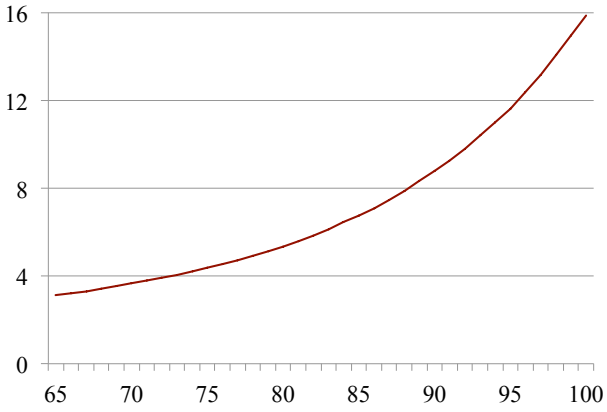
Adopt the 4-percent rule. A third strategy is to spend a fixed percentage of one's *initial* retirement savings. For example, under the so-called 4-percent rule advocated by some financial planners, the retiree each year withdraws 4 percent of that initial balance.[3] The advantage is that the retiree has a low probability of running out of money. The downside is that such a rule does not permit retirees to periodically adjust consumption in response to investment returns. For example, if returns are less than expected in a given year, the retiree should respond by reducing consumption to preserve the assets – a fixed 4-percent withdrawal is not consistent with such flexibility.

Required Minimum Distributions

An alternative strategy is to base withdrawals on the IRS's Required Minimum Distributions (RMD), a percent of assets that individuals are required to withdraw each year starting at age 70½.[4] The IRS makes no claim that the RMD, which is designed to recoup deferred taxes, is the basis of an optimal draw-down strategy. Yet an RMD approach satisfies four important tests of a good strategy.

First, like other rules of thumb, it is easy to follow. The IRS stipulates withdrawal percentages based on life expectancy tables.[5] A withdrawal schedule at younger ages – percent of assets withdrawn, by age – can be based on the same life tables used for the RMD rules (see Figure 1). Second, the RMD strategy provides a superior way to manage wealth, because it allows the percentage of remaining wealth consumed each year to increase with age, as the retiree's remaining life expectancy decreases. Third, since consumption is not restricted to income, the household is less likely to chase dividends and is more likely to have a balanced portfolio. Fourth, consumption responds to fluctuations in the market value of the financial assets, because the dollar amount of the drawdown is based on the portfolio's current market value.[6]

Figure 1. Required Minimum Distributions as Percent of Assets, by Age



Source: Authors' calculations based on IRS tables for Required Minimum Distributions (see U.S. Department of the Treasury, 2012); annual percentages are in the Appendix.

To determine which real-world strategy would produce the best possible outcome, the rules of thumb can be compared with an optimal wealth draw-down strategy.

An Optimal Draw-down Strategy

Managing retirement wealth involves trading off the enjoyment of spending one's assets on consumption against the risk of spending too much and prema-

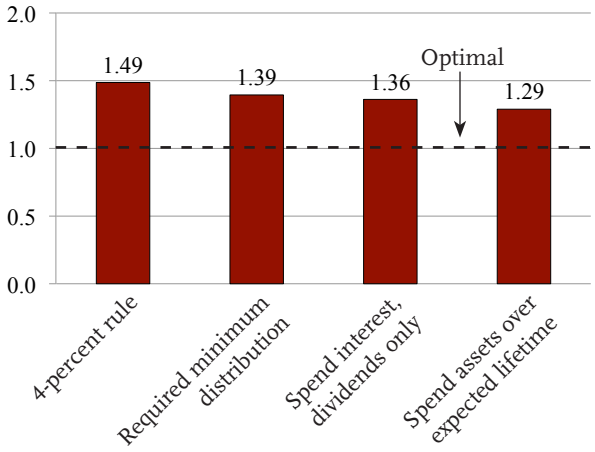
turely depleting one's resources. The household's goal is to optimize this tradeoff – in economic jargon, to maximize the expected utility of consumption. This analysis uses the example of a married couple in which the spouses are the same age and both retire at 65.[7] The husband receives Social Security benefits of $12,000 annually, and the wife receives $6,000 through a spousal benefit, for a total household income of $18,000 per year.[8] Assume that the household has $250,000 in financial assets, excluding the equity in their house.[9] The investment options include stocks and risk-free bonds.[10] Each year the household decides how to allocate its assets between stocks and bonds and how much to take out of its account. The model yields a draw-down pattern that maximizes the expected utility of consumption.[11]

The Horse Race

The next step is to conduct a horse race in which the benefits generated by the optimal draw-down strategy are compared with the benefits of the traditional rules of thumb. This comparison uses a measure called Strategy Equivalent Wealth (SEW). The number for each strategy is the factor by which the dollar value of the household's wealth, at age 65, must be multiplied so that the couple is as well off as a household that follows the optimal strategy. The optimal strategy has an SEW of 1, and the SEWs for the suboptimal strategies are, by definition, greater than 1.

Figure 2 shows the results for the retired couple.[12] For the rules of thumb, the SEW factors range from 1.29 for the life expectancy strategy – the best – to 1.49 for the 4-percent rule – the worst. Interestingly, the RMD approach, with an SEW of 1.39, performs better than the 4-percent rule. In dollar terms, the couple would need about $25,000 more – or 10 percent (1.49 minus 1.39) of their $250,000 savings – to be persuaded to use the 4-percent rule *instead of* the RMD strategy. The RMD approach also has advantages over the other rule of thumb strategies, as discussed earlier, that are not captured in the SEW calculations. For example, the RMD approach is easier to follow than the life expectancy strategy. And the RMD approach does not provide a temptation to chase dividends as does the interest only strategy.

Figure 2. Draw-down Strategies, by Strategy Equivalent Wealth (SEW)



Source: Webb and Sun (2012).

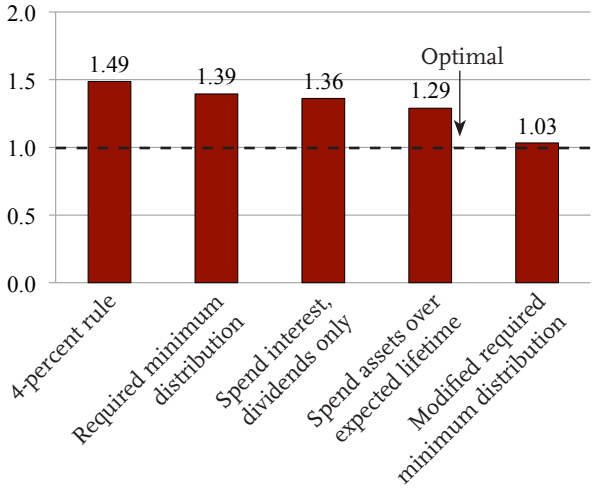
Making Good Better

A potential criticism of the RMD rule is that it results in relatively low consumption early in retirement. While this outcome might be optimal for some households, particularly those fearful of rising health care costs, others might prefer greater consumption at younger ages when they are better able to enjoy it. This result could be achieved by a modification to the RMD rule, namely to consume interest and dividends (but not capital gains), plus the RMD percentage of financial assets. To illustrate, a 65-year-old couple with financial assets of $102,000 who received $2,000 of interest and dividends in the last year, would spend $5,130: the $2,000 in interest and dividends, plus 3.13 percent (the age 65 Annual Withdrawal Percentage under the RMD strategy) of $100,000. In contrast, a household following the unmodified RMD rule would spend just $3,130.

Figure 3 on the next page compares the SEW of the modified RMD strategy with the SEWs of the strategies reported in Figure 2. At 1.03, it outperforms all the alternatives, including the unmodified RMD rule. The disadvantage of the modified RMD rule is its greater complexity. Although 401(k) and IRA statements report interest and dividends, households must extract this information and perform the

necessary calculations to determine their withdrawal amount. One solution might be for 401(k) and IRA statements to report the amount available for spending under the modified RMD rule.

Figure 3. Draw-down Strategies Including Modified RMD, by Strategy Equivalent Wealth (SEW)



Source: Webb and Sun (2012).

Conclusion

Rather than attempt the complex calculations necessary to arrive at an optimal strategy for drawing down and spending their retirement savings, retirees rely on easy-to-follow rules of thumb such as the 4-percent rule advocated by some financial planners. This *brief* suggests that the IRS' Required Minimum Distribution rules may be a viable alternative. For financial and practical reasons, the effectiveness of the alternative RMD strategy compares favorably to traditional rules of thumb. And a modified RMD strategy does even better.

Endnotes

1 Devising a retirement spending and investing plan requires, among other things, estimating longevity, trading off spending early in one's retirement years against saving money for old age, and choosing how much to invest in risky stocks, which offer higher expected returns in exchange for greater risk.

2 One other solution to the draw-down issue is to buy an annuity that provides a guaranteed regular income sufficient to meet the household's essential expenses, investing any remaining assets. However, retirees have resisted buying annuities, perhaps out of a desire to retain liquidity as protection against unexpected medical costs. Other proposed explanations for the lack of enthusiasm for annuities include the presence of a bequest motive, unattractive annuity pricing due to adverse selection, and various behavioral biases. See Brown (2009) for an overview of the literature.

3 A Google search for "4-percent rule" and "retirement" produced more than 50,000 hits. Also see Bengen (1994).

4 Failure to take the Required Minimum Distributions results in a 50-percent tax on the required withdrawal amount.

5 The IRS' RMD distribution table reflects estimates of the joint life expectancy of couples in which the spouse is 10 years younger than the account holder.

6 It should be noted that while the IRS requires the withdrawals, it does not require retirees to spend their withdrawals.

7 The paper on which this *brief* is based also provides utility functions and comparisons of draw-down strategies for couples in which the wife is six years younger, as well as for single men and single women.

8 If the husband dies, the wife would begin collecting Social Security survivor benefits, which would pay $12,000 and result in a reduction in total household income.

9 Households with fewer financial assets may view them as a liquidity backstop for emergency expenditures, rather than as an income source. Households with more financial assets may have bequest requirements that are an important consideration in their decumulation plans.

10 The assumed real interest rate for the risk-free bond is 3 percent, which is above current rates but approximates the long-run average rate.

11 The utility function is discounted by the couple's rate of time preference, assumed to be 3 percent.

12 The SEW results vary depending on the number of individuals and on various assumptions. For more detailed results, see Sun and Webb (2012).

References

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APPENDIX

Annual Withdrawal Percentages following Required Minimum Distribution Strategy

Age	%	Age	%
65	3.13	83	6.13
66	3.22	84	6.45
67	3.31	85	6.76
68	3.42	86	7.09
69	3.53	87	7.46
70	3.65	88	7.87
71	3.77	89	8.33
72	3.91	90	8.77
73	4.05	91	9.26
74	4.20	92	9.80
75	4.37	93	10.42
76	4.55	94	10.99
77	4.72	95	11.63
78	4.93	96	12.35
79	5.13	97	13.16
80	5.35	98	14.08
81	5.59	99	14.93
82	5.85	100	15.87

Note: Individuals are required to follow the RMD rules during the calendar year in which they reach age 70½. The withdrawal schedule for younger ages used in this analysis is calculated based on the same life tables used for the RMD rules.
Source: Webb and Sun (2012).

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The Center for Retirement Research at Boston College was established in 1998 through a grant from the Social Security Administration. The Center's mission is to produce first-class research and educational tools and forge a strong link between the academic community and decision-makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

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