

Issues with the Transition Mechanism in the Actuarial Approach to Retirement Spending

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Abstract

This paper highlights some issues with the actuarial retirement withdrawal strategy. Potential problems exist with the transition mechanism (present value of an annuity calculation, PVAN) as the retiree ages. With poor initial returns the actuarial approach does not cut spending quickly enough, due to the mathematics of the annuity formula. In addition, spending rates can be too high or too low initially depending on the assumed discount rate, which can result in the inefficient spending down of wealth. If a future value is specified as a bequest/safety net, the minimum annual spending over the 30-year period decreases as the future value increases. The effect of a desired future value on annual spending volatility depends on whether the actual subsequent compounding rate is high or low. An increase in the desired future value results in smaller initial withdrawals, with the portfolio's recovery dependent on future returns. As remaining longevity declines with a constant future value, large (small) positive returns as the retiree ages force the transition mechanism (PVAN) to significantly increase (not significantly increase) the annual withdrawal, thus increasing (decreasing) the standard deviation. This effect can possibly turn annual spending negative. Therefore the actuarial approach, while providing solutions to some issues, creates new ones.

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