Retirement Income
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Gradual versus Lump-Sum Annuitization: The Jury is Still Out

By Editor Test *Thu, May 30, 2013*

A study by a unit of Fidelity Investments showed that it is premature to recommend a gradual, fixed percentage-of-assets monthly annuity purchase as an option in retirement plans, because the strategy would lead to widely different outcomes based on luck and timing.

DIA Purchasing Timeframe

	5 Years	10 Years	15 Years
Current age (years)	60	55	50
Gender	Male	Male	Male
Starting balance	$400,000	$300,000	$225,000
Starting salary	$65,000	$60,000	$55,000
Salary growth rate	1.50%	1.50%	1.50%
Contribution rate	12%	12%	12%
Retirement age	65	65	65
Account Type	Tax-deferred	Tax-deferred	Tax-deferred
Monthly DIA Purchase	**1.00%**	**0.50%**	**0.33%**

• Note that income annuities purchased are life-only for both the DIA strategy and the lump-sum strategy. Other income annuity types such as cash refund would be equally viable as long as applied to both strategies.

What if participants could contribute to deferred income annuities (DIAs) through their defined contribution plans? Would this option give them a safe way to lock in retirement income in advance, while diversifying their interest rate risk and leveraging the time value of money? In terms of maximizing future income, would this strategy outperform the purchase of a single-premium immediate annuity (SPIA) with a lump sum at retirement?

Analysts in the R&D section of Strategic Advisors, Inc., the registered investment advisor of Fidelity Investments, recently compared the hypothetical outcomes of two parallel strategies: Using small percentages of the bond or cash portions of a balanced retirement savings account to make incremental purchases of a DIA for several years before retirement and saving to buy a SPIA at retirement.

Their conclusion after exhaustive calculations: It depends. The experiment showed them what they had probably already guessed: that the outcome depends to a significant degree on when the annuity purchases (incremental or lump-sum) were made. In other words, it depends on luck.

In their study, Fidelity's Steven Feinschreiber, a senior vice president, Prazenjit Mazumdar, specialist, and Andrew Lyalko, director of R&D, tested the two strategies under thousands of conditions. They used deferral periods of five, 10 and 15 years. They tried the two strategies over a myriad of historical periods, starting in 1926. They used two target equity allocations: a constant level of 50% equity exposure in the total portfolio at retirement or a constant 50% exposure within only the risky (non-DIA) portion of the portfolio.

In one hypothetical, for instance, a 50-year-old man making $55,000 a year dripped 0.33% of his tax-deferred account assets (starting balance: $225,000; contribution rate: 12%) into a DIA each month. In a second hypothetical, a 55-year-old man dripped 0.5% per month. In a third, a 60-year-old man dripped 1% per month. Each intended to retire at age 65. (See Fidelity chart below.)

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Meanwhile, in a parallel universe, three similar men with similar assets were letting their accounts grow, without making contributions to a DIA. Three equity allocations during the accumulation period were also tested: 20%, 50% and 70%.

The results, in terms of accumulated wealth at retirement (present value of annuity plus excess accumulation) and percentage replacement of pre-retirement income, were inconclusive. The DIA strategy modestly outperformed the lump-sum strategy when the equity allocation of the entire portfolio was held constant, but the lump-sum strategy modestly outperformed the DIA strategy when the equity allocation of only the non-DIA portion of the portfolio was constant. Longer deferral periods delivered slightly better results than shorter deferral periods. Higher equity exposure was associated with better outcomes.

So it’s too soon to say that gradual purchase of retirement income is better than lump-sum purchase. Just as important, the results revealed a wide historical variation in the outcomes of DIA incremental purchase strategies. That suggests that it would be difficult to recommend this strategy to retirement plan participants, because they would all have different outcomes based on luck.

Feinschreiber et al suggest further avenues of research, such as testing the effectiveness of buying the same amount of future income each month, contributing equal dollar amounts to the DIA each month, and aiming for a target income replacement rate.

Fidelity doesn’t offer its own DIA. But it does support a web-based platform where advisors and consumers can buy DIAs directly from a number of insurance companies. And it owns a life insurance company. As the largest retirement plan provider in the U.S., it also presumably has more than a casual interest in the potential use of DIAs as in-plan annuity options.