

ANNUITY ANALYTICS

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How Much to Allocate to Annuities?

IF A CLIENT ASKED YOU HOW MUCH OF her retirement nest egg should be allocated to risky stocks versus safe bonds, I presume you'd have an answer. And if she then asked you how much of her equity should be in domestic stocks versus foreign stocks, or growth stocks versus value stocks, I'm equally sure you'd have something intelligent to say about that, too. After all, these classic *asset allocation* questions are the bread and butter of the investment management business.

But what if a client asked you how much of her nest egg should be invested in an annuity product versus regular mutual funds? What if she wants to know what proportion, if any, of her portfolio should be allocated to a variable annuity with a guaranteed living income benefit (GLiB)? Or what if she wants to figure out at what age she should purchase an annuity — or begin lifetime income on an existing VA product?

These are definitely not portfolio asset allocation questions. Instead, they are what I like to label *product allocation* issues. And to be frank, the traditional investment industry — both academic researchers and practitioners — hasn't paid enough attention to them, yet. But as your clients age and move into

their golden years, protecting them against the multitude of new risks will become increasingly important to them, and thus to you. So, in an attempt to get some traction in discussing these issues, in this column I would like to offer some recommendations on the product allocation aspect of retirement income planning.

Three Product Silos

Let me start by characterizing the universe of products available for use within client portfolios to generate income during retirement. I like to group the entire zoo of retirement income products into three distinct “silos.”

- In the first silo are traditional mutual funds, exchange traded funds, separately managed accounts and other conventional accumulation-based instruments. They contain no bells, no whistles and no guarantees. The retirement income itself is generated by periodically selling an appropriate number of units. Think reverse-dollar-cost averaging (DCA), otherwise known as a systematic withdrawal plan (SWiP).

- In a second silo I place defined benefit (DB) pensions and income annuity products, including variable, fixed and inflation-adjusted, that offer

a lifetime income at a very cheap economic price. In this silo, too, there are no bells or whistles, but high mortality credits come at the cost of complete irreversibility and loss of liquidity. I label anything in this silo a lifetime payout income annuity (LPiA)

- In the third silo I place all of the remaining financially engineered products that are not-quite-pensions and not-quite-SWiPs. These are the modern “sequence of returns”-protected investments and longevity put options, including, of course, variable annuities with guaranteed lifetime income benefits (GLiBs).

Putting it all Together

Now, let's take the case of a retiree, age 65 and in good health, who wants to start withdrawing 4.5 percent of the current value of her portfolio, inflation-adjusted each year, to generate income for the rest of her life. She doesn't have any pre-existing income from a pension (ignoring Social Security for the moment), nor does she intend to borrow against home equity using a reverse mortgage. The \$4,500 desired per \$100,000 initial nest egg is a reasonable spending rate according to most studies. The following diagram

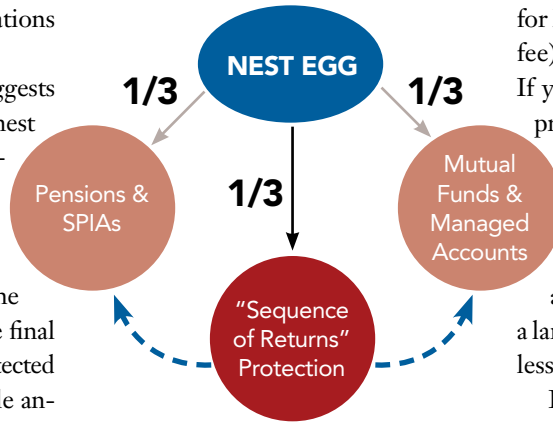
displays my recommended allocations within the three silos:

Drum roll please: My model suggests that one-third of her investible nest egg should be allocated to pure pensions (i.e., she should use a third of her money to buy a SPIA); one-third to conventional mutual funds and/or managed accounts (i.e., she should keep things as is); and the final third to “sequence of returns”-protected investments (for example, variable annuities with a guaranteed living income benefit). Finally, within the investment portion itself, the asset allocation should be roughly half equity, half bonds.

Balancing Financial Legacy vs. Income Sustainability

Now, you might ask, where in the world do these model allocation numbers come from? Well, to make a long (mathematical) story short, this particular allocation produces an optimized balance between the goals of personal retirement income sustainability and leaving a financial legacy for the client’s descendants. More technically, this allocation will induce the most efficient 85 percent *income sustainability ratio* while still maintaining a 20 percent *financial legacy* in present value terms.

As you can see from my diagram, the third of the client’s nest egg that is allocated to the “sequence of returns” protection swings like a pendulum between the pure pension and the pure investment silos depending on market conditions. When times are good the pendulum behaves like a mutual fund and increases in value during bull markets. To be sure, it never quite catches up to the traditional investment silo because of the higher fees and insurance costs. On the other hand, when times are bad and markets are falling, the pendulum swings in the other direction and behaves more like a SPIA or pure pension. Anyone that purchased a VA + GLiB in late 2007 knows ex-



actly what I mean: The product has morphed into a traditional income annuity, which pays a percentage of the base for the life of the annuitant. The bear market “pensionized” your variable annuity.

Account for all Existing Pension Annuities

Now, before you rush out and annuitize one-third of your client’s investment portfolio, don’t forget that my hypothetical model client had no pre-existing pensions. In real life, of course, you should add the discounted value of pension and Social Security benefits to arrive at a mark-to-market “value” of the retirement nest egg. (Get your neighborhood actuary to do this, if necessary. The number can be in the hundreds of thousands of dollars.) Only one-third of this broadly defined nest egg should be annuitized. So, if the discounted value of her Social Security benefits is more than twice her liquid investable net worth at retirement, she already has all the annuitized income she needs. She has satisfied the quota.

Extending the Numerical Example

As you can imagine, my “one-third thrice” model allocation depends on a number of assumptions, both implicit and explicit. For example, to generate these values I assumed a VA + GLiB that guarantees income of 5 percent

for life at an extra (above management fee) cost of 75 basis points per year. If your favorite VA charges more, or promises less, the optimal allocation is going to be lower than one-third. In addition, if your client wants greater sustainability than (in this example) 85 percent, then annuitize more. If she wants to leave a larger financial legacy, then annuitize less, and so on.

In fact, there are many underlying variables, such as retirement age, gender, health status, desired spending rates and inflation assumptions that will move the optimal allocations in one direction or the other. If you want to see how these inputs change the optimal allocations, you can play with the free calculator at www.qwema.ca. Nevertheless, this example is intended to serve as my “stake in the ground” in the discussion of optimal product allocation.

Avoid the Black Swans You Can Predict

In closing, mathematical models of all sorts and types have come under intense criticism during the last year, as most of them completely missed the Black Swans that swam in with the financial tsunami. So, if you decide to fudge a bit and allocate plus-or-minus 10 percent to any of these categories, your client will likely do just fine. On the other hand, if you completely ignore one of these three silos or disproportionately allocate to another one, I would love to see your model.

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