



# The Consequences of Overestimating Retirement Expenses

March 6, 2017

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Research has shown that individual and household spending declines in real-dollar terms upon and following retirement. Yet most financial advisors still use traditional retirement planning approaches that target constant real-dollar spending for the client's planning period. This targeting of constant dollar spending in retirement has more to do with following traditional practice and software limitations rather than any specific desire to meet client needs. In this article, I will:

- summarize some of the research in this area;
- point out some of the weaknesses of traditional financial planning surfaced by this research; and
- show how these weaknesses can be easily addressed by using the actuarial approach that I advocated in my *Advisor Perspectives* articles of November 14, 2016, *The Only Withdrawal Plan You Will Ever Need*, and September 7, 2015, *Think Like an Actuary to Become a Better Advisor*.

I will conclude the article with an example to illustrate how the actuarial approach can be used to:

- increase your client's spending budgets;
- decrease the assets necessary to satisfy a given spending objective;
- increase spending flexibility; or
- some combination of the above

by developing a spending strategy for your clients that better aligns with their declining spending needs in retirement.

## Background

In his 1998 book *The Prosperous Retirement: Guide to the New Reality*, Michael Stein talked about the "go-go, slow-go and no-go" phases of retirement and their implications for retirement planning. Stein's first rule of retirement was that the active stage (go-go) spending budget "tends to equal the pre-retirement budget, if the retiree can afford it." In the subsequent stages, spending is reduced as older retirees tend to grow weary of long vacations and traveling.

In his 2005 FPA Journal article, *Reality Retirement Planning: A New Paradigm for an Old Science*, Ty Bernicke criticized “traditional retirement planning” where “consumers tend to over save for retirement, underspend in their early years of retirement or postpone retirement.” He advocated a new retirement-planning approach based on the reality that a household's real spending will generally decrease incrementally throughout retirement. The anticipated result, per Bernicke, was “clients can make more realistic retirement saving assumptions and will be able to retire sooner.”

In his 2005 Association for Financial Counseling and Planning Education article, *Age Banding: A Model for Planning Retirement Needs*, Somnath Basu discussed several weaknesses inherent in what he referred to as the traditional financial-planning approach, and he proposed a new “age banding model” approach to planning for retirement needs. A main criticism lodged by Basu against the traditional approach was the assumption made by financial planners that “all living expenses during retirement [would] increase at the overall rate of inflation.” Basu suggested that a retiree’s projected expenses be determined from a matrix consisting of four categories of expenses and three age bands. The present value of these projected expenses would then be compared with assets needed to support the retiree’s expenses. Basu’s approach was, in many ways, like the actuarial approach I advocate, but was thought to be too complicated at the time.

Several other researchers and retirement experts have more recently resurrected the call for reflecting the observed decline in real dollar spending as we age in the financial planning/budgeting process. Abraham Okunsanya, in his February 1, 2017, UK Finalytiq blog post, *Busting the Myth of ‘U-Shaped’ Retirement Spending*, cited research by the International Longevity Center-UK to support his statement, “An ideal sustainable withdrawal strategy should follow the typical spending pattern in retirement. This allows higher withdrawal at the early part of retirement and should progressively fall (at least in real terms) over their retirement period.”

Okunsanya’s blog post also linked to Michael Kitces’ November 2, 2016, post, *Using Age Banding To Estimate How Spending Will Decline In Retirement*, in which he noted that real-retirement spending in the U.S. “tends to decrease by at least 1%/year throughout retirement.” He indicated that a Basu-type age-banding approach with different categories of expenses would be more defensible than assuming that the total future expenses would increase by inflation minus 1%. He acknowledged, “In practice, doing this kind of projected retirement spending may also be more difficult in today’s financial planning software, simply because most of the tools aren’t built to handle multiple different spending categories, each with their own inflation rates and age-banded spending cuts.”

However, there is cheap and easy-to-use retirement-planning software that does these things and more.

## **The actuarial approach**

As discussed in my previous two articles, the actuarial approach is based on the following very simple balance equation:

Current value of investments	+	Present value (PV) of future income from other sources (IFOS)	=	PV future non-recurring expenses	+	PV future annual recurring spending budgets
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Where the items on the left-hand side of the equation are equal to the retiree's (or retiree household's) assets and the right-hand side of the equation are equal to the retiree's spending liabilities. This equation tells us that to be able afford to buy or consume something on the right-hand side of the equation, the retiree needs to have sufficient assets on the left-hand side.

It also tells us that aligning your client's assets and their spending objectives and needs in retirement is largely an exercise in how to efficiently divvy up their assets into buckets that will support their future spending. This is essentially a process of determining the value of the retiree's assets and then subtracting (in some priority order) the value of the items the retiree wishes to consume in retirement, until the assets have been exhausted. Going through this process several times at the time of retirement and then subsequently at annual visits is a useful exercise that helps the retiree fine-tune spending priorities.

To determine the value of the retiree's assets (the left-hand side of the balance equation), we add the current value of invested assets and the present value (PV) of expected income from other sources (IFOS). These other sources include Social Security, pensions, annuities, income from part-time employment, anticipated home or other property sales, etc. To determine the PV of the IFOS (and the other present values), assumptions must be made about future investment returns/discount rates, future rates of inflation and the retiree's (or retiree household's) lifetime planning period. See the discussion below regarding assumptions we recommend for these purposes.

Once the value of the client's assets has been determined, the process of prioritizing items to be purchased/consumed in retirement can commence (the right-hand side of the balance equation). You can start with the items that are expected to be non-recurring, such as long-term care (LTC) expenses, unexpected expenses, one or two new cars, a new kitchen for the house, etc. Or, you can start with the recurring items, such as essential expenses. When the PV of a selected expense item has been determined, it should be subtracted from the assets to determine how much remains to be spent. You can just imagine how much fun this process may be when a husband and wife enter the financial advisor's "retirement store" with diametrically different priorities, but no one said that the retirement-planning phase of a marriage would be any easier than the preceding phases.

As Basu and others noted, it may make sense to disaggregate the large and important "future annual recurring spending budget" into separate recurring-expense categories that have the same expected future cost patterns. In the actuarial budget calculator (ABC) for retirees workbook on my website, I have provided a tab for this purpose. The budget by expense-type tab disaggregates total recurring spending into three types:

1. Essential non-health expenses (ENH)
2. Essential health expenses (EH)
3. Non-essential expenses

I recommend that retirees assume their ENH will increase in the future with inflation, and EH will increase at a rate greater than inflation. This leaves Non-essential expenses (if any assets remain at this point) as the more flexible fertile ground for expenses that may decline in real or absolute terms as we age.

### **Smoothing and the actuarial approach**

The actuarial approach is not a “set-and-forget” approach. There is no up-front pronouncement based on historical investment experience and 10,000 Monte Carlo simulations that “there is a 95.3% probability that a given level of real dollar spending will be maintained throughout retirement if you spend exactly the spending budget each year and never make another adjustment in your plan”. The actuarial approach anticipates that many things will change each year, and the client and financial advisor will meet periodically (I recommend annually) to revisit and recalculate the plan to reflect those changes.

Some financial advisors, however, doubt their clients will like the potential budget variability under the actuarial approach. But this variability can be managed using rainy day funds, transference of funds between spending buckets or by smoothing the actuarially calculated budget. For example, the spending budget can be smoothed from year-to-year by increasing it by the actual increase in inflation (like might be done with the 4% rule) and checking to see that the resulting budget falls within an acceptable range around the actuarially computed value.

### **Actuarial assumptions/determinations of present values**

To determine present values, I recommend using an investment return/discount rate that is roughly consistent with discount rates inherent in current annuity pricing. Currently this rate is 4%. I also recommend assumed inflation equal to the discount rate minus 2% (currently 2%) and a lifetime planning period (period of retirement) equal to the greater of: 95 minus attained age or the retiree’s life expectancy using current individual annuity mortality experience. A discount rate based on annuity pricing can be considered the rate at which the retiree’s liability can effectively be “settled,” as the retiree could theoretically discharge his future spending liability via the purchase of annuities.

The cost of providing \$1 real dollar per year for the lifetime planning period of a retiree under my recommended assumptions is comparable to the cost produced by the BlackRock CORI tm index. Our numbers are not exactly the same, because I don’t change our assumptions daily and I generally recommend a longer lifetime-planning period than BlackRock.

### **Example**

[While all the calculations in this example can be performed using basic present values, with a minor approximation discussed below, they can also be duplicated in the ABC for retirees found on my website using our recommended assumptions: 4% discount rate, 2% inflation and lifetime planning period: 95 - age]

Bill is 66 years old and his wife, Susie is 62. They no longer have children at home, no longer have

education expenses to bear, no longer have a mortgage to pay off and for the past five years have been consistently saving about 15% of their gross compensation for retirement. Last year, Bill earned \$75,000 and Susie earned \$60,000. They are considering retirement and have decided to meet with their financial advisor, Rita, who helps them perform an inventory of their assets:

- Invested Assets: \$800,000
- Social Security benefits (assuming immediate commencement for both): a total of \$36,540 per annum (\$21,804 for him and \$14,736 for her)
- Home equity: \$250,000

Bill has accrued a fixed-dollar single-life annuity benefit from his company's pension plan of \$20,000 per annum that could begin immediately.

Susie has a single-life-annuity benefit from her prior employment equal to \$10,000 per annum that would commence in that amount when she reaches age 65.

They have and expect to receive no other significant sources of income in retirement.

Bill and Susie estimate the gross retirement income that would replace their pre-retirement standard of living to be 70-75% of their combined gross pay, as they will no longer have FICA taxes, commuting expenses and savings requirements. They also expect their federal and state income taxes to be slightly lower when they retire.

They both have mothers who are still alive, but their families had to spend a fair amount of money on LTC for their fathers. Fortunately for them, their mothers should be able to pay for their own LTC, but they probably won't be leaving a large estate to Bill and Susie. Our couple has no LTC insurance and they do not want to count on their children for this or any type of support. Therefore, they have decided that they will dedicate their home equity toward covering their future LTC needs.

Using the recommended assumptions and data discussed above, Rita calculates the PVs of their income from other sources. [Rita uses a lifetime planning period of 31 years - a 95 minus the average of Bill and Susie's ages – for all her calculations for both parties as a close approximation to doing the PV calculations separately for each person].

PV of Bill and Susie's combined Social Security benefits is \$859,337

PV of Bill's immediate pension is \$365,841

PV of Susie's pension is \$154,049

The total PV of their assets (excluding their home equity dedicated to LTC needs) is \$2,179,237 (\$800,000 in investments + \$859,337 + 365,841 + 154,059). This amount is what they have in their "wallets" as they enter Rita's "retirement store."

Bill and Susie decide that if they leave money to their children, it will result from favorable investment experience and/or their premature death. Therefore, they will not now plan on a specific bequest

motive. They agree to set aside \$100,000 for unexpected expenses, including future cars and non-recurring home repairs. They had previously decided that their home equity would cover the PV of their LTC costs. Thus, they leave the “future non-recurring expense” section of Rita’s retirement store with \$2,079,237 (\$2,179,237 - \$100,000) remaining in their “wallets” and head to Rita’s “future annual recurring expenses section”.

At this point, Rita calculates their total annual recurring spending budget based on the traditional approach that their remaining assets will be used to provide constant real-dollar spending throughout the entire retirement period. She does this by dividing \$2,079,237 by the cost of providing \$1 payable per annum for 31 years, increasing each year by assumed inflation of 2% per year (\$23.5177). This gives them a total annual recurring-spending budget of \$88,412 per year. Bill, who is more ready to retire than Susie, thinks this amount will be just fine. Susie thinks that this amount is below their current standard of living and they should work at least another year before they retire. Rita is happy to quantify how much working another year would increase the couple’s spending budget, but Bill wants to look at scenarios that don’t involve maintaining constant real-dollar spending, as he has heard about research that shows spending tends to decline in real terms as we age.

They discuss the potential implications of living with a spending budget that may only increase by inflation less 1% per year. Rita tells them that their initial annual recurring spending budget can be increased to \$100,563 (\$2,079,237 divided by \$20.6759), but future spending budgets will be slightly less each future year. Rita tells the couple that this budget is comparable to their standard of living last year. Bill says, “That sounds great,” but Susie says, “Wait, not so fast. I don’t think all our future expenses will decline in real dollars. I’m worried about soaring medical costs, and the price of food doesn’t seem to be declining in real dollars.”

“Fair enough,” says Rita, “let’s break down your expenses into separate categories and see how much your future essential expenses will cost and how much will be left over for your future non-essential expenses.” [Those of you not in Rita’s office can find these calculations in the budget by expense-type tab of my workbook]. They estimate the couple’s

- current ENH expenses at \$50,000 (including taxes)
- current EH expenses at \$10,000

Susie and Rita agree that their ENH expenses will probably increase by inflation (2% per year) and they estimate that their EH expenses will increase by inflation + 1.5%, or 3.5% per annum. Rita calculates the cost of future ENH and EH expenses under these assumptions at \$1,175,885 and \$288,649 respectively, leaving \$614,703 (\$2,079,237 - \$1,175,885 - \$288,649) in the couple’s spending wallet for future non-essential expenses.

Rita shows them the following chart, which illustrates several ways (out of an infinite number) they can spread the remaining non-essential expenses over their lifetimes. Bill says that the various budget numbers are fine, but it is just as important for him to know the amount in the non-essential bucket initially (\$614,703). Susie now feels somewhat more comfortable knowing that their future essential expenses will basically be covered by Social Security and their pensions, and if they retired now, they would have a PV of over \$600,000 to use on non-essential activities like traveling, entertaining, going out to dinner and other leisure activities. She still thinks, however, that it might be safer for both, or at

least one of them, to continue to work.

***Bill and Susie's current year's non-essential and total spending budgets under alternative spreading approaches***

	Real Future Increases (2%) for 31 Yrs	Inflation - 1 % (1%) Increases for 31 Yrs	Equal Future Dollars for 31 Yrs	Equal Future Dollars for 20 Yrs	Equal Future Dollars for 15 Yrs	Real (2%) Increases for 13 Yrs, then 1/2 that Level of Real Increases for 10 Yrs
Current Year Non-Essential Spending Budget	\$26,138	\$29,730	\$33,605	\$43,491	\$53,161	\$40,532
Total Current Year Spending Budget	\$86,138	\$89,730	\$89,730	\$103,491	\$113,161	\$100,532

For the algebra geeks, Rita included the far-right hand column above in the table as the answer to the question, “How much Bill and Susie’s current non-essential spending budget would be if it remained constant in real dollars for 13 years (until Susie reached age 75), dropped to one-half that level in real dollars for the next 10 years and ceased when Susie reached age 85 (assuming all assumptions were realized)?” Bill thought that this alternative was most consistent with experiencing Michael Stein’s go-go, slow-go and no-go stages.

**Summary**

Despite research showing we spend less in real dollars as we age in retirement, many financial advisors continue to target constant real-dollar spending for their clients. In many cases, this is a result of inertia or software limitations. While I agree with Michael Kitces that, “any decrease is arguably a better baseline for retirement planning than the current default of assuming no decrease at all,” planning can be improved in this area by using basic actuarial principles. At a minimum, compare the data points produced by my workbooks with your client recommendations to improve your spending budget consulting.

*Ken Steiner is a retired actuary with a website entitled, "How Much Can I Afford to Spend in Retirement"*

