**Smart’ COLA: How It Impacts Retirement Income**

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**Smart COLA is a cost-of-living-adjustment that takes into account the performance of the portfolio each year, rather than a COLA that always remains the same. Here we compare how the same portfolio fares under both withdrawal calculations.**



In retirement, a “smart” cost-of-living-adjustment, or COLA, takes into account the performance of the portfolio each year. The contrast would be a COLA that remains the same each and every year regardless of portfolio performance.

This article analyzes a retirement portfolio that was subjected to a consistent 3% COLA increase in the annual withdrawal every year versus a retirement portfolio with a “smart” COLA that varied the COLA percent based on the portfolio’s performance each year.

The smart COLA guidelines were as follows: If the portfolio’s annual return was negative, the end-of-year withdrawal did not increase beyond what was withdrawn the prior year—hence a 0% COLA. If the portfolio’s return was 0%–10%, the COLA applied to the end-of-year withdrawal was 3% (that is, the amount withdrawn was 3% larger than the prior year’s withdrawal). If the portfolio return was higher than 10%, the COLA applied to the end-of-year withdrawal was 6%.

The starting balance of the retirement portfolio in this analysis was assumed to be $1,000,000. The asset allocation was 35% large-cap U.S. stock, 25% small-cap U.S. stock, 25% U.S. bonds, and 15% cash with annual rebalancing. The first-year withdrawal was set at $40,000 (representing 4% of the starting balance).

The time period of analysis included 71 rolling periods of 25 years each from 1926–2020. In other words, this analysis studied 71 different retirees who annually withdrew money from their retirement portfolio over a period of 25 years. The first retiree withdrew money at the end of each year from 1926–1950. The next retiree withdrew money annually from 1927–1951, and so on. This “rolling period” analysis captures the sequence-of-returns risk faced by retirees.

The average annual withdrawal for the 71 different retirees was $60,038 if we assume a constant 3% COLA was applied during each rolling 25-year period. Under this assumption, the first-year withdrawal was $41,200 (or $40,000 x 1.03) for each of the 71 retirees. The second-year withdrawal was $42,436 (as calculated by $41,200 x 1.03). The withdrawal in the 25th year was $82,572.

The total amount withdrawn by each of the 71 retirees was $1,500,942—or 50% more than the starting balance of $1 million. Because a fixed-percent COLA ignores the portfolio return each year, we know in advance what the dollar amount of the withdrawal will be each and every year. The average ending balance for this group of 71 retirees was $5,973,519. Only one retiree ran out of money before 25 years—and for that retiree it happened in the 25th year.

As shown in Table 1, if a smart COLA (as described above) was implemented, the average annual withdrawal increased to $68,340—or the equivalent of just under $700 more income per month in retirement. The trade-off is that the average ending balance after 25 years declined to $5.53 million from $5.97 million. Either way, the average retiree had a *lot* of money remaining after 25 years. Moreover, there were no portfolio failures within 25 years when employing a smart COLA.

For comparison, if the RMD governed the annual withdrawals for each retiree from age 72 to 97 (a 25-year period) the average ending portfolio balance was $1.80 million and the average annual withdrawal was $137,319. This is not surprising given the fact that the RMD is an escalating percentage over time.

The benefit of a smart COLA should be quite self-evident: the dollar amount of the withdrawal from the portfolio is not allowed to increase from the prior year *if* the portfolio experiences a negative return. Conversely, the COLA is allowed to escalate when the portfolio experiences a good return (in this analysis anytime the portfolio’s return was above 10%). Essentially, this approach simulates the decisions that would likely be made in real time by a retiree after accounting for the performance of her portfolio each year.

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| Table 1. Fixed vs. Smart COLA Impact on Diversified Portfolio\***$1,000,000 starting balance$40,000 initial withdrawal (prior to COLA being applied)Analysis is the summary of 71 rolling 25-year periods from 1926–2020** |
| **Annual Withdrawals determined by** | **Average annual withdrawal** | **Average portfolio balance after 25 years of withdrawal** | **Portfolio failure rate within 25 years** |
| **Fixed 3% COLA**3% COLA every year regardless of annual portfolio performance | $60,038 | $5,973,519 | 1.4% |
| **Smart COLA**0% COLA when annual portfolio return was negative3% COLA when annual portfolio return was between 0%–10%6% COLA when annual portfolio return was above 10% | $68,340Increase of $8,302 in average annual withdrawal compared to fixed 3% COLA | $5,530,709Decrease of $442,810 in average ending balance after 25 years compared to fixed 3% COLA | 0% |

*Source: Craig Israelsen
\*Asset allocation: 35% large-cap US stock, 25% small-cap US stock, 25% US bonds, 15% cash*

What happens to a retirement portfolio when the asset allocation model is *not* diversified—that is, the retiree has a 100% allocation to a specific asset class? Table 2 outlines the results among the 71 retirees if their retirement portfolio was committed 100% to each of the four separate asset classes (large-cap stock, small-cap stock, bonds, cash).

Interestingly, the average annual withdrawal does not change all that much. But the average ending portfolio balance after 25 years of withdrawals changes dramatically. In addition, the portfolio failure rate skyrockets in retirement portfolios that are 100% bonds or 100% cash.

Perhaps the results in Table 2 might serve as a reminder that it is imperative for retirees to stay diversified in retirement. With very few exceptions, retirees should have a material allocation to performance “engines.” Portfolio engines are domestic and non-U.S. equities and diversifiers such as real estate and commodities. Portfolio “brakes” include U.S. bonds, non-U.S. bonds and cash. They are obviously important for risk mitigation, but not at the exclusion of engines.

This analysis was done using a sophisticated spreadsheet that I have developed over the past 10 years. The most important insight that I’ve gained in developing and using this spreadsheet tool is this: When withdrawals are prudent and the portfolio is diversified, it is really hard to kill a retirement portfolio within 25–30 years.

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| Table 2: Fixed vs. Smart COLA With Single Asset-Class Retirement Portfolios**$1,000,000 starting balance$40,000 initial withdrawal (prior to COLA being applied)Analysis is the summary of 71 rolling 25-year periods from 1926–2020** |
| **Various portfolio allocations** | **Average annual withdrawal** | **Average portfolio balance after 25 years of withdrawal** | **Portfolio failure rate within 25 years** |
| Fixed 3% COLA |
| 100% Large-Cap Stock | $59,049 | $8,992,192 | 4.2% |
| 100% Small-Cap Stock | $57,718 | $18,677,050 | 5.6% |
| 100% Bonds | $57,934 | $1,668,766 | 23.9% |
| 100% Cash | $54,112 | $735,830 | 39.4 |
| Smart COLA |
| 100% Large-Cap Stock | $68,206 | $8,480,396 | 2.8% |
| 100% Small-Cap Stock | $64,391 | $18,219,070 | 5.6% |
| 100% Bonds | $60,285 | $1,564,114 | 21.1% |
| 100% Cash | $55,572 | $678,479 | 39.4% |

*Source: Craig Israelsen
Smart COLA guidelines: 0% COLA when annual portfolio return was negative; 3% COLA when annual portfolio return was between 0%–10%; 6% COLA when annual portfolio return was above 10%*

*If you have any questions or concerns, I would love the opportunity to meet with you to discuss your retirement and investment goals.*

Kind Regards,



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