Cost Of Living Adjustments

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What happens when Cost of Living Adjustments (COLA) are reduced? How does this change effect total benefits? Is there a simple mathematical way to determine the equivalent benefit reduction? Yes there is.

Let us start with a model of how COLA works. Let us assume a person's OASI benefit is $1,000. This amount is adjusted by inflation of 3% a year for twenty-five years. Table 1 shows in column 2 these payments. The total benefits paid are $36,459. What happens if we reduce COLA by 0.5%? Column 4 shows this cash flow and it totals $34,158 or 6.31% less than column 2.

We now calculate the present value for this cash flow. Column 3 totals $25,000 which it should. Column 5 totals $23,596 or 5.61% less than the present value of the full COLA column. Which value is correct, 5.61% or 6.31% or are both wrong?

Column 6 takes the $1,000 initial benefit and reduces it by 6.31% to $937 and then increases by the full COLA of 3%. The total value is $34,158 which is identical to column 2.

Column 7 takes the $1,000 initial benefit and reduces it by 5.61% and then increases it by the full COLA of 3%. The total value is $34,412 which does not match any of the other columns.

The correct answer is: a 0.5% reduction in COLA each year is equivalent to an initial benefit cut of 6.31%.

Table 2 lists the equivalent up front benefit cut for COLA reductions versus retirement span. The average life expectancy at age 65 is about 18 to 19 years. A 3% reduction is about a 23% initial benefit cut.

Table 1

Cost of Living Adjustment and Effect of Reductions

1	2	3	4	5	6	7
Year	**Value**	**Present Value**	**Reduced**	**Reduced Present Value**	**Check -6.31 %**	**Check -5.61 %**
1	$1,000	$1,000	$1,000	$1,000	$937	$944
2	$1,030	$1,000	$1,025	$995	$965	$972
3	$1,061	$1,000	$1,051	$990	$994	$1,001
4	$1,093	$1,000	$1,077	$986	$1,024	$1,031
5	$1,126	$1,000	$1,104	$981	$1,054	$1,062
6	$1,159	$1,000	$1,131	$976	$1,086	$1,094
7	$1,194	$1,000	$1,160	$971	$1,119	$1,127
8	$1,230	$1,000	$1,189	$967	$1,152	$1,161
9	$1,267	$1,000	$1,218	$962	$1,187	$1,196
10	$1,305	$1,000	$1,249	$957	$1,222	$1,232
11	$1,344	$1,000	$1,280	$953	$1,259	$1,268
12	$1,384	$1,000	$1,312	$948	$1,297	$1,307
13	$1,426	$1,000	$1,345	$943	$1,336	$1,346
14	$1,469	$1,000	$1,379	$939	$1,376	$1,386
15	$1,513	$1,000	$1,413	$934	$1,417	$1,428
16	$1,558	$1,000	$1,448	$930	$1,460	$1,471
17	$1,605	$1,000	$1,485	$925	$1,503	$1,515
18	$1,653	$1,000	$1,522	$921	$1,549	$1,560
19	$1,702	$1,000	$1,560	$916	$1,595	$1,607
20	$1,754	$1,000	$1,599	$912	$1,643	$1,655
21	$1,806	$1,000	$1,639	$907	$1,692	$1,705
22	$1,860	$1,000	$1,680	$903	$1,743	$1,756
23	$1,916	$1,000	$1,722	$898	$1,795	$1,809
24	$1,974	$1,000	$1,765	$894	$1,849	$1,863
25	$2,033	$1,000	$1,809	$890	$1,904	$1,919
Totals	**$36,459**	**$25,000**	**$34,158**	**$23,596**	**$34,158**	**$34,412**
Equivalent benefit reduction			-6.31%	-5.61%		

Table 2

Equivalent Benefit Cut Based on COLA Reduction

	Reduction from 3.00% Is Equivalent to this Benefit Cut										
Term	0.25%	0.50%	0.75%	1.00%	1.25%	1.50%	1.75%	2.00%	2.25%	2.75%	3.00%
18	-2.2%	-4.4%	-6.5%	-8.6%	-10.5%	-12.5%	-14.4%	-16.2%	-18.0%	-21.5%	-23.1%
19	-2.4%	-4.7%	-6.9%	-9.1%	-11.2%	-13.2%	-15.2%	-17.1%	-19.0%	-22.6%	-24.4%
20	-2.5%	-4.9%	-7.3%	-9.6%	-11.8%	-13.9%	-16.0%	-18.1%	-20.0%	-23.8%	-25.6%
21	-2.6%	-5.2%	-7.7%	-10.1%	-12.4%	-14.7%	-16.8%	-19.0%	-21.0%	-24.9%	-26.8%
22	-2.8%	-5.5%	-8.1%	-10.6%	-13.0%	-15.4%	-17.7%	-19.9%	-22.0%	-26.0%	-28.0%
23	-2.9%	-5.8%	-8.5%	-11.1%	-13.7%	-16.1%	-18.5%	-20.8%	-23.0%	-27.1%	-29.1%
24	-3.1%	-6.0%	-8.9%	-11.6%	-14.3%	-16.8%	-19.3%	-21.6%	-23.9%	-28.2%	-30.3%
25	-3.2%	-6.3%	-9.3%	-12.1%	-14.9%	-17.5%	-20.1%	-22.5%	-24.9%	-29.3%	-31.4%
26	-3.4%	-6.6%	-9.7%	-12.7%	-15.5%	-18.3%	-20.9%	-23.4%	-25.8%	-30.4%	-32.6%
27	-3.5%	-6.9%	-10.1%	-13.2%	-16.1%	-19.0%	-21.7%	-24.3%	-26.8%	-31.5%	-33.7%