Inflation: Understanding the Effects on a Retiree

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Almost all of us have felt the effects of inflation on our lives from the rising cost of bread and gasoline to ever increasing costs of health insurance. However, inflation could present a unique problem to a retiree because retirees are no longer working and may be more likely to be on fixed incomes.

The first problem when talking about inflation is, "What is a good rate of inflation to model"? The Federal Reserve attempts to aim for a 2% rate of inflation over the medium term. The US Bureau of Labor Statistics manages the data on CPI and Chain CPI which attempts to track inflation. They have a handy calculator on their website in fact to track generally any value of money over a period of time. (https://www.dol.gov/general/topic/statistics/inflation)

Depending on the chart you choose, the chart could show that the average rate of CPI increases since 2010 is 1.77%. Calculations for medical expenses currently show a 2.87% inflation since 2010. A lot of retirees would point out this feels low in fact. Did we just have a good decade or is this a trend? A long-term average going back 1914 is 3.23% for general inflation, and 1970 to 1979 showed an average inflation of 7.25% per year. Which numbers do you choose?

We generally suggest when creating a model that you look at 2.25-2.5% for general spending patterns and 4% for modeling future medical expenses. This is primarily because of the role the Federal Reserve is playing post-1982 with their monetary policy. However, you may want to also have a model showing higher than average inflation as well so you can see how you would be able to weather higher inflation.

The problem with inflation is typically the longer you live the more expensive things will become. For instance, consider a $50,000 living expense today versus 10 and 20 years in the future.

Value Today	$50,000	$50,000		$50,000	$50,000
Inflation Rate	2.50%	4%		2.50%	4%
Number of years	10	10		20	20
Value Needed	$64,004.23	$74,012.21		$81,930.82	$109,556.16

A couple things you should notice: The first 10 years aren't too bad with an increase of around 28% in spending need. Potentially this could be covered by moderate usage of your savings, a decrease in spending, etc. The second thing you may notice is that this presents a problem for those who are living on a fixed income, because you have a reasonable chance of needing 63% to over 100% more income later in life. The older you get the worse this may get.

You may then decide to invest a portion of your savings and live off that to attempt to combat inflation. Rates of return now matter because you will be taking income out at an increasing rate while you attempt to grow your money. We are going to model this using linear returns. You may want to read our article/video on sequence of returns risk to understand some of the potential issues with this.

Rate of Return		2%	3%	4%	5%	6%
		$100,000	$100,000	$100,000	$100,000	$100,000
4% rule	$4,000	$97,920.00	$98,880.00	$99,840.00	$101,000.00	$102,000.00
	$4,160.00	$95,635.20	$97,561.60	$99,507.20	$101,890.00	$103,960.00
	$4,326.40	$93,134.98	$96,032.26	$98,988.03	$102,658.10	$105,871.20
	$4,499.46	$90,408.23	$94,278.78	$98,268.12	$103,291.55	$107,724.02
	$4,679.43	$87,443.37	$92,287.33	$97,332.23	$103,776.69	$109,508.02
	$4,866.61	$84,228.30	$90,043.34	$96,164.25	$104,098.92	$111,211.89
	$5,061.28	$80,750.36	$87,531.53	$94,747.09	$104,242.58	$112,823.33
	$5,263.73	$76,996.37	$84,735.83	$93,062.70	$104,190.99	$114,329.00
	$5,474.28	$72,952.53	$81,639.40	$91,091.96	$103,926.26	$115,714.47
	$5,693.25	$68,604.47	$78,224.54	$88,814.66	$103,429.33	$116,964.09
	$5,920.98	$63,937.16	$74,472.67	$86,209.43	$102,679.82	$118,060.96
	$6,157.82	$58,934.93	$70,364.30	$83,253.68	$101,655.99	$118,986.80
	$6,404.13	$53,581.42	$65,878.98	$79,923.53	$100,334.66	$119,721.88
	$6,660.29	$47,859.55	$60,995.24	$76,193.76	$98,691.10	$120,244.89
	$6,926.71	$41,751.50	$55,690.59	$72,037.74	$96,698.95	$120,532.88
	$7,203.77	$35,238.68	$49,941.42	$67,427.32	$94,330.12	$120,561.08
	$7,491.92	$28,301.69	$43,722.98	$62,332.82	$91,554.70	$120,302.82
	$7,791.60	$20,920.29	$37,009.32	$56,722.86	$88,340.84	$119,729.39
	$8,103.27	$13,073.36	$29,773.24	$50,564.38	$84,654.61	$118,809.88
	$8,427.40	$4,738.89	$21,986.22	$43,822.46	$80,459.95	$117,511.08

Depending on the rate of return you are able to achieve, you may find your assets start to deplete due to inflation. If you act too conservatively, that could hurt you. There is another interesting issue. Let's assume you were achieving a 5% linear rate of return. At age 85 you have $80,459.95 and let's assume you needed to pay for an expense such as a long-term care facility. We would put that under a medical expense which has a 4% inflation rate, which grew over 20 years. That means a $100,000 expense could cost around $219,112.31 in 20 years at age 85 for you. Your original $100,000 is now worth $80,459.95 since you used your returns for living expenses. So even though you kept your principal mostly whole and generated income, you could still have an issue.

Some rules of thumbs:

1. Inflation tends to be most destructive to those who live a long time and have medical expenses or greater than average expenses later in life.
2. Allocating your assets to match or beat inflation could be desirable if you can take the risk.
3. Managing inflation should be done on an annual basis because things can change.

Sources:

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