

Managing Retirement Income Through Economic and Market Cycles

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Overview

Traditionally, the focus of retirement planning has been on accumulating assets, resulting in an estimated \$24 trillion in retirement assets as of December 31, 2015.¹

While asset accumulation is important, an often overlooked aspect of retirement planning is the distribution of those assets. Many investors who have accumulated significant assets have not done much planning for their distribution. This lack of distribution planning, particularly when combined with the uncontrollable variables of market performance and inflation, can present a potentially significant problem. This paper presents five “decision rules” investors may find useful as they prepare for the distribution of their retirement assets.

Fundamentals

One of the first questions many investors ask is, “How much money can I take out without depleting my assets?”

Much of the academic research indicates an initial withdrawal rate falls in the range of 4% of retirement assets. However, depending on the person’s situation, that may or may not be enough to meet their income requirements. It is very important to calculate, based on current and proposed spending, how much income will be needed for both fixed and discretionary expenses and use that to set an initial withdrawal rate.

It is also important to realize that once the withdrawal rate is set, it may need to be adjusted based on the value of the underlying assets and to keep pace with inflation. It is important to make the distinction between a withdrawal rate and a withdrawal amount. Many investors focus on the dollar amount that is needed to meet their income requirements. However, if the dollar amount becomes too high relative to the principal (i.e. the withdrawal rate becomes much higher than the initial rate), assets will be depleted too quickly, and the investor may run out of money during his or her lifetime.

By utilizing a process that provides rules for managing the withdrawal rate through economic and market cycles, investors may gain greater confidence that their assets will not be depleted, and they may even be able to increase their initial withdrawal rate. In an article from the *Journal of Financial Planning*, “Decision Rules and Portfolio Management for Retirees: Is the ‘Safe’ Initial Withdrawal Rate Too Safe?” author Jonathan Guyton introduced this process and published his analysis. During the period from 1973 to 2004 (a period which included the 1973-1974 bear market, the abnormally high inflation of the mid-1970s to early 1980s, and the 2000-

¹ “The U.S. Retirement Market, Fourth Quarter 2015,” Investment Company Institute, 2016.

2002 bear market) his analysis demonstrated that investing in a balanced and diversified multi-asset class portfolio – together with applying the decision rules – would have allowed an investor to increase the initial withdrawal rate over previously published levels of around 4%.²

Decision Rules in Action – Hypothetical Examples

To illustrate how the decision rules might help answer the question “What am I going to do if...?” we will use a hypothetical couple, Joe and Mary Smith. The Smiths have a \$2 million hypothetical portfolio and have determined they need \$100,000 (before taxes) in annual income initially, a 5% initial withdrawal rate. They plan to increase their withdrawals each year by the amount of the prior year’s inflation as measured by the Consumer Price Index (CPI). The hypothetical examples that follow show how each of the decision rules may be used in a particular market or economic scenario. Please be reminded that all of the following hypothetical examples have been provided for illustration purposes only and do not reflect the performance of an actual portfolio. There is no guarantee that any investment will provide positive performance over any period of time and an investor can lose money. Other methods of analysis may produce different results, and the results for the individual portfolio and for different periods may vary depending on market conditions and the composition of the portfolio. Hypothetical gross performance does not reflect the deduction of fees and expenses, which would reduce performance in an actual account. Investing entails risk, including loss of principal.

Two things to note about the calculated values in these examples:

- The beginning value of a given year was calculated as (previous year beginning value – previous year withdrawal) x growth in previous year. As the focus of this paper is on illustrating how the rules work, no assumptions have been made about tax rates to be applied and these values do not reflect the effect of taxes and other costs that can reduce a portfolio’s value. Taxes are an important consideration in overall distribution planning and investors may wish to consult a tax advisor for further information.
- The current withdrawal rate (CWR) equals the withdrawal in the current year divided by the current year beginning value. For example, using the Baseline Rule, year 2 beginning value = $(\$2,000,000 - \$100,000) \times 1.1 = \$2,090,000$; year 2 CWR = $\$103,000 / \$2,090,000 = 4.9\%$.

Decision Rule One - The Standard Withdrawal Rate or Baseline Rule

- This is the baseline rule to be followed for future withdrawals. It is applied when the current year’s withdrawal rate (CWR) is calculated to be within 20% of the initial withdrawal rate (IWR). For a 5% IWR, the range of acceptable current withdrawal rates in future years would be 4% to 6% (20% below and above .05).
- The current withdrawal amount is increased over the prior year’s amount by the inflation rate (as measured by the CPI and capped at 6% per the High Inflation Rule, discussed later).

² “Decision Rules and Portfolio Management for Retirees: Is the ‘Safe’ Initial Withdrawal Rate Too Safe?” Jonathan T. Guyton, *Journal of Financial Planning*, October, 2004.

Hypothetical Example of Decision Rule One

As the chart below shows, after subtracting the first year withdrawal of \$100,000, the Smith portfolio grows by 10% to a beginning value of \$2.09 million in year 2. The inflation rate was 3%. Adjusting the previous year's withdrawal amount of \$100,000 by inflation results in a potential \$103,000 withdrawal, which is a current withdrawal rate of 4.9% of their portfolio. This is within the range of acceptable withdrawal rates.

	Year 1	Year 2	Year 3	Year 4	Year 5
Annual Inflation	3%	3%	3%	3%	3%
Beginning Value	\$2 million	\$2,090,000	\$2,185,700	\$2,287,571	\$2,396,128
CWR	5.0%	4.9%	4.9%	4.8%	4.7%
Withdrawal	(\$100,000)	(\$103,000)	(\$106,090)	(\$109,273)	(\$112,551)
Growth in Year	10%	10%	10%	10%	

Decision Rule Two - The Bull Market Rule

- This rule allows an investor to potentially increase the amount of planned income, which could occur in an environment of portfolio appreciation or in a relatively benign inflationary environment. This rule applies when the current withdrawal rate is calculated to be less than the initial withdrawal rate by 20%; for a 5% rate this would be 4% or below.
- The action taken is to increase the prior year withdrawal by 10% after adjusting for inflation.

Hypothetical Example of Decision Rule Two

Assume that in year 3, the value of the Smith portfolio has grown to \$2.72 million from the previous \$2.28 million. Increasing the year 2 withdrawal amount of \$103,000 by the previous year's inflation rate of 3% would result in a withdrawal of \$106,090 or 3.9% CWR of the portfolio value. Applying Decision Rule Two, the prior year rate would be adjusted by 10% after inflation (or \$106,090) resulting in a \$116,700 (rounded) withdrawal or 4.3% of \$2.72 million.

	Year 1	Year 2	Year 3	Year 4	Year 5
Annual Inflation	3%	3%	3%	3%	3%
Beginning Value	\$2 million	\$2,280,000	\$2,721,250	\$2,865,005	\$3,019,284
CWR	5.0%	4.5%	3.9%	4.2%	4.1%
Withdrawal	(\$100,000)	(\$103,000)	(106,090) Adjusted to 4.3% (\$116,700)	(\$120,201)	(\$123,807)
Growth in Year	20%	25%	10%	10%	

Decision Rule Three - The Bear Market Rule

- This rule protects the portfolio specifically in years when the portfolio experiences a negative return.
- The action taken is to maintain the prior year's withdrawal amount without making an adjustment for inflation.

Hypothetical Example of Decision Rule Three

Assume that in years 1 and 2 the hypothetical portfolio experiences negative returns. Implementing decision rule three, the withdrawal amount remains the same in years two and three. In year 3 the hypothetical portfolio experiences a positive return; the inflation adjusted withdrawal amount for year 4 would be \$103,000. This example also illustrates the interrelationship of the decision rules. In this scenario, Decision Rule Four – the Flat Market Rule (described next) – also comes into play. Since the \$103,000 is more than the 6% outside limit, the withdrawal amount remains the same as the previous year. In year 5, the withdrawal amount is increased as it is within the acceptable range.

	Year 1	Year 2	Year 3	Year 4	Year 5
Annual Inflation	3%	3%	3%	3%	3%
Beginning Value	\$2 million	\$1,805,000	\$1,619,750	\$1,671,725	\$1,728,928
CWR	5.0%	5.5%	6.2%	6.1%	5.5%
Withdrawal	(\$100,000)	(\$100,000)	(\$100,000)	(\$103,000) Adjusted to 5.6% (\$92,700)	(\$95,481)
Growth in Year	-5%	-5%	10%	10%	

Decision Rule Four - The Flat Market Rule

- This rule protects the portfolio from a current withdrawal rate that may be too high. A withdrawal rate that is extraordinarily high could damage the long term viability of the portfolio by depleting the principal, thus reducing the earning capability in future years. This scenario could arise in a difficult market environment, or in a high inflationary environment. This rule applies when the current withdrawal rate is calculated to be greater than the initial withdrawal rate by 20% or more; for a 5% rate this would be a rate greater than 6%.
- The action taken is to reduce the current year's withdrawal by 10% after adjusting for inflation.

Hypothetical Example of Decision Rule Four

Assume that in year 4 the value of the hypothetical Smith portfolio is \$1.7 million; inflation is at 3%. Increasing the withdrawal by the amount of inflation would result in a withdrawal of \$109,273, a CWR of 6.3% of the \$1.7 million portfolio value, which is outside the acceptable 20% limit. Applying Decision Rule Four, the current year withdrawal is calculated to be reduced by 10% after inflation or \$10,927. In year 5, the CWR is calculated to be \$101,295, which is 5.6% of the portfolio value.

	Year 1	Year 2	Year 3	Year 4	Year 5
Annual Inflation	3%	3%	3%	3%	3%
Beginning Value	\$2 million	\$1,919,000	\$1,834,160	\$1,745,351	\$1,811,707
CWR	5.0%	5.4%	5.8%	6.3%	5.6%
Withdrawal	(\$100,000)	(\$103,000)	(\$106,090)	(\$109,273) Adjusted to 5.6% (\$98,345)	(\$101,295)
Growth in Year	1%	1%	1%	10%	

Decision Rule Five - The High Inflation Rule

- This rule specifically protects the portfolio from years in which inflation is significantly higher than anticipated.
- The action taken when inflation, as measured by the CPI, is greater than 6% is to cap the inflation adjustment on the withdrawal amount at 6%.

Hypothetical Example of Decision Rule Five

Assume that at the end of the second year the Smith's portfolio has grown to \$2.09 million and inflation is 10%. Instead of withdrawing an amount fully adjusted for inflation (\$110,000), the inflation adjustment is capped at 6% resulting in a withdrawal of \$106,000 or a current withdrawal rate of 5.1%.

	Year 1	Year 2	Year 3	Year 4	Year 5
Annual Inflation	10%	10%	10%	10%	10%
Beginning Value	\$2 million	\$2,090,000	\$2,182,400	\$2,277,044	\$2,373,737
CWR	5.0%	5.1%	5.2%	5.2%	5.3%
Withdrawal	(\$100,000)	(\$106,000)	(\$112,360)	(\$119,102)	(\$126,248)
Growth in Year	10%	10%	10%	10%	

Conclusion

It should be noted that the decision rules are not meant to be used in isolation, but rather, should be considered in conjunction with other elements of the retirement distribution strategy. Integral to the distribution process is establishing a realistic initial withdrawal rate based on an analysis of current or projected spending. It is also important to create a portfolio asset allocation that is appropriate for the client's return objectives and risk tolerance level. However, as illustrated in this paper, having a process that employs decision rules to answer the question "What am I going to do if...?" can be very useful in helping to guide retirement withdrawals in a number of economic and market conditions.

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