Endowment Spending Policy

April 2020

Retirees and their advisors should establish a spending plan to balance the desire to maintain a consistent lifestyle with preserving assets for a retirement that could last 30 to 40 years. To achieve this balance, develop a spending policy to determine what percentage of the retirement savings will be spent initially and how this amount will change over time to reflect the effects of inflation and the performance of the underlying investment portfolio.

Executive Summary

- Retirement can last 30 to 40 years, so retirees should establish a spending policy that balances the desire to maintain a consistent lifestyle with the need to preserve assets.
- A spending policy determines the initial spending amount and how it will change over time to keep pace with inflation and reflect the performance of the underlying investment portfolio.
- Just using a 5% lifestyle spending rate can deplete a diversified investment portfolio in about 20 years.

To establish a spending policy, the advisor and the client(s) calculate the amount of money needed to supplement the income they will receive from other sources. To ensure the spending amount is realistic, the advisor needs to convert the annual spending amount to a percentage of the retirement portfolio.

The spending policy that is chosen determines the way the spending amount is calculated from year to year. All too often individuals assume a "lifestyle spending policy," which increases at the same rate as the Consumer Price Index (CPI) is the best approach because it takes into consideration the effect of inflation. While it is attractive because it is simple, the lifestyle spending policy is flawed in two important areas:

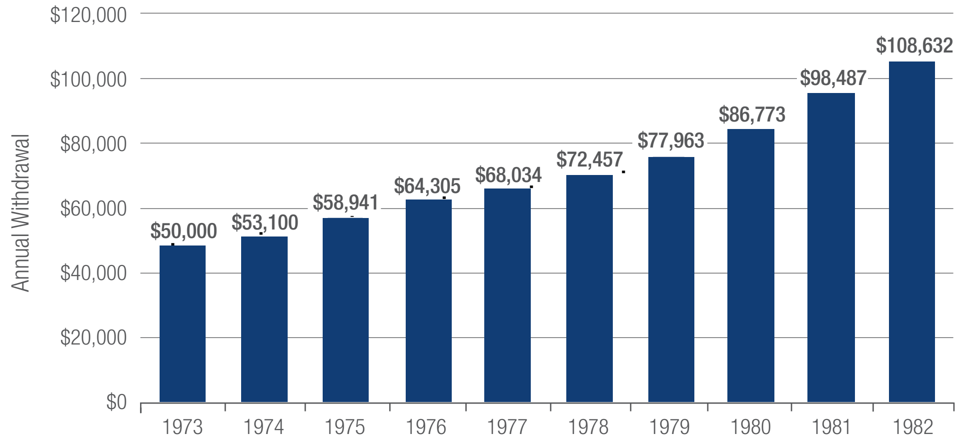
1. This policy does not tie the spending level to the performance of the underlying investment portfolio. As a result, the lifestyle spending policy never requires the retiree to slow or reduce their spending during an extended bear market.

2. During periods of high inflation, spending amounts may increase too rapidly, exposing the retirement portfolio to the risk of premature depletion.

The weaknesses in the lifestyle spending policy are illustrated in the chart in *figure 1* which shows annual spending amounts for a hypothetical retiree who began taking portfolio distributions of 5% from their $1 million retirement portfolio on January 1, 1973, and increased their spending by the rate of inflation every year. Historically, this was one of the most difficult retirement periods in the last 80 years, due to an extended period of high inflation coupled with a significant bear market. Inflation during the 10-year period from 1973–1982 averaged 8.75% annually which resulted in the spending amount during the period doubling from $50,000 to $108,632.

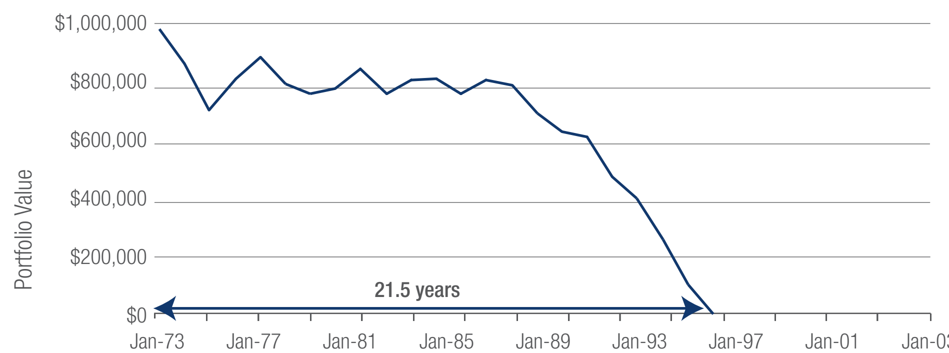
For this retiree, high inflation was only half the story. Over the same timeframe, the

Figure 1 | Hypothetical January 1, 1973, Retiree's Spending Using a 5% Lifestyle Policy



Inflation based upon CPI-U. Source: Bureau of Labor Statistics.

Figure 2 | Hypothetical January 1, 1973, Retiree's Account Balance Using a 5% Lifestyle Policy



60% large cap stocks (S&P 500 Index) and 40% intermediate government bonds (Bloomberg Barclays U.S. Government Intermediate-term TR Bond Index).
Past performance does not guarantee future results. Sources: S&P Global and Bloomberg.

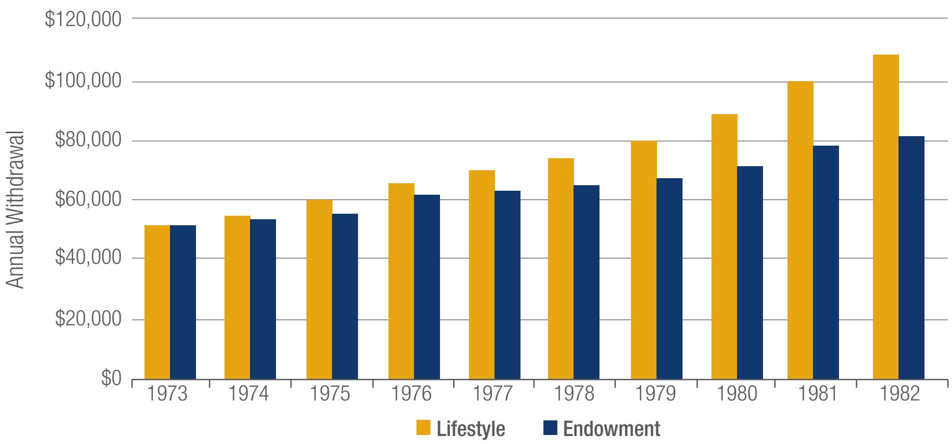
Figure 3 | Endowment Calculations on a Hypothetical Portfolio

Account Status	Year 1	Year 2	Year 3	Year 4
Hypothetical Portfolio Value (PV)	$1,000,000	$800,000	$700,000	$800,000
Spending Amount	$50,000	$51,940	$55,773	$55,822
Current Spending Rate (Amount/PV)	5.0%	6.5%	8.0%	7.0%

Spending Calculations	Year 1	Year 2	Year 3	Year 4
90% of Prior Yr Spending Amount		$45,000	$46,746	$50,196
10% of PV Times 5% Spending Rate		$4,000	$3,500	$4,000
Subtotal before Cost of Living Adjustment (COLA)		$49,000	$50,246	$54,196
Prior Year CPI Increase		6%	11%	3%
Annual COLA		$2,940	$5,527	$1,626
Spending Amount		$51,940	$55,773	$55,822
Increase / (Decrease) from Prior Year		3.9%	7.4%	0.1%

Not indicative of a particular investment. For illustration purposes only.
Source: Thornburg Investment Management.

Figure 4 | Hypothetical January 1, 1973, Retiree's Spending Amounts Using 5% Lifestyle vs Endowment Policies



60% large cap stocks (S&P 500 Index) and 40% intermediate-term government bonds (Bloomberg Barclays U.S. Government Intermediate-term TR Bond Index).
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stock market declined significantly. The S&P 500 Index lost approximately 37% during the first two years of this individual's retirement. The combination of choosing a lifestyle spending policy during a period of high inflation and the losses from the 1973–1974 bear market resulted in the investment portfolio being depleted in just under 21 years *(figure 2)*. While the lifestyle spending policy is flawed, it continues to be widely used because of its simplicity. Yet, as we can see, using this policy in the wrong economic and investment market can lead to a retirement portfolio being prematurely depleted.

Another better alternative is the "endowment spending policy" which is used by some college and university endowments. Unlike the lifestyle approach, the endowment spending policy uses a more conservative approach that combines a percentage of the prior year's spending with a percentage of the current market value of the investment portfolio to determine the next year's annual spending amount. Having a percentage of the spending amount tied to the performance of the portfolio will increase or decrease the spending amount in tandem with the value of the investment portfolio. A decrease in the spending amount during an extended bear market is vital for improving the sustainability of any investment portfolio. While the endowment spending policy is designed to lower the spending amount during a bear market, it does so gradually, thereby allowing the retiree time to adjust spending and stay on plan. Like university endowments that use a similar policy, it provides a balance between funding current operations with preserving assets to cover future operations.

To begin using an endowment spending policy, retirees and their advisors must decide upon two things, the initial spending rate and what formula should be used for the smoothing rule. A description of the endowment spending policy's variables follows:

THE SPENDING RATE is the percentage of the portfolio value the retiree will use to calculate their annual spending amount. There is much industry debate about what constitutes a sustainable spending rate. Right now there is a consensus that some percentage between 4% and 5% provides a prudent balance between generating a reasonable amount of annual income and giving the portfolio the opportunity to grow. For our hypothetical, we will choose 5% as our spending rate, which equates to $50,000 per $1 million of savings in the first year of retirement.

THE SMOOTHING RULE identifies the speed at which the retiree's annual spending amount will be increased or decreased based on the portfolio's investment performance. For example, a 90/10 smoothing rule assumes that 90% of the spending amount will be based on the prior year's spending and 10% will be based upon the portfolio's current valuation.

Figure 3 illustrates how the endowment spending policy would be calculated during a hypothetical four-year period with high annual inflation. In this example, we assume the retiree, who has a $1 million retirement portfolio, chooses an endowment spending policy with a 5% spending rate and a 90/10 smoothing rule. The hypothetical shows the portfolio value on January 1st of each year and the annual spending calculation.

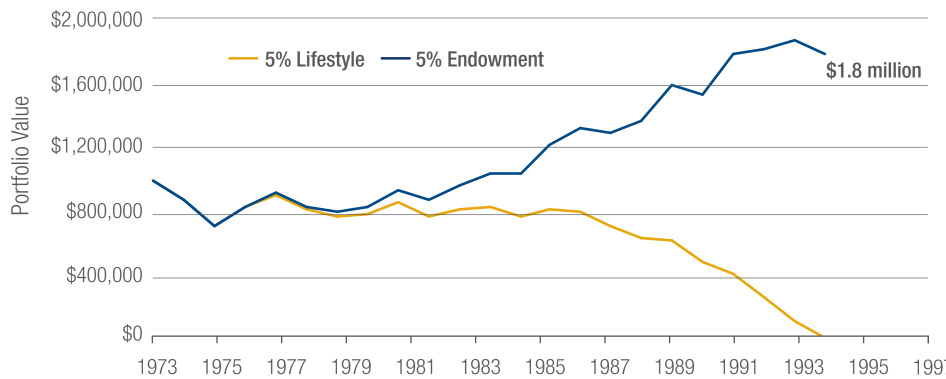
Note how the annual spending rate increases during the first two years of the bear market, but does not keep pace with inflation since the underlying portfolio value does not warrant it. This willingness to reduce the spending amount when the investment portfolio is not performing well is key to having a sustainable retirement portfolio. The endowment spending policy also assists in maintaining a reasonable current spending amount during both bear and bull markets.

Let's return to the January 1, 1973, retiree and see the difference an endowment spending policy can make to the sustainability of their retirement portfolio. *Figure 4* is a hypothetical comparing the annual spending amounts for the first 10 years of retirement using the lifestyle and endowment spending policies.

Again, note how much better the endowment policy controls the spending amounts than the lifestyle policy, during this high inflationary bear market. In fact, over the 10-year period, the spending decreased by almost $102,000 in aggregate (10% of the initial portfolio value), allowing this amount to remain invested in the portfolio for future periods. This reduced spending amount gave the portfolio time and more assets with which it could take advantage of market conditions as they improved.

The net effect of the change to an endowment spending policy for the January 1, 1973, retiree is quite dramatic. The hypothetical in *figure 5*, which compares the impact to the retirement portfolio using the lifestyle and endowment spending policies, demonstrates that the lifestyle policy resulted in an exhausted portfolio in just under 21 years, while the endowment policy portfolio generated the needed income and grew to $1.8 million during the same time frame.

Figure 5 | Hypothetical January 1, 1973, Retiree's Account Balance Using a 5% Lifestyle vs. Endowment Policies



60% large cap stocks (S&P 500 Index) and 40% intermediate government bonds (Bloomberg Barclays U.S. Government Intermediate-term TR Bond Index).
Past performance does not guarantee future results. Sources: S&P Global and Bloomberg.

When using an endowment spending policy, retirees and their advisors should expect that spending amounts may not keep pace with inflation, unless the performance of the underlying investment portfolio grows sufficiently to support it. This slow "tightening of the belt" during bear markets is one of the keys to a sustainable retirement portfolio. ■

Following this strategy does not assure or guarantee sustainability of a retirement portfolio or better performance nor do they protect against investment losses.

Investments carry risks, including possible loss of principal. Investments in equity securities are subject to additional risks, such as greater market fluctuations. Bonds are subject to certain risks, including interest-rate risk, credit risk, and inflation risk. The principal value of bonds will fluctuate relative to changes in interest rates, decreasing when interest rates rise. Investments in stocks and bonds are not FDIC insured, nor are they deposits of or guaranteed by a bank or any other entity.

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The Consumer Price Index (CPI) measures prices of a fixed basket of goods bought by a typical consumer, including food, transportation, shelter, utilities, clothing, medical care, entertainment and other items. The CPI, published by the Bureau of Labor Statistics in the Department of Labor, is based at 100 in 1982 and is released monthly. It is widely used as a cost-of-living benchmark to adjust Social Security payments and other payment schedules, union contracts and tax brackets. Also known as the cost-of-living index.

The CPI-U is a subset of CPI that measures the effects of inflation on all urban consumers.

The S&P 500 Index is an unmanaged broad measure of the U.S. stock market.

The Bloomberg Barclays U.S. Government Intermediate-term TR Bond Index covers all publicly issued, non-convertible, fixed rate, dollar-denominated U.S. Government securities with a maturity between 1 and 10 years. Issues are rated at least Baa3/BBB by two of the following rating agencies: Moody's, Fitch or S&P.

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