

## THE PROCESS OF MANAGING RETIREMENT INCOME PRESERVING PURCHASING POWER



Given the ongoing advances in medical research, a client considering a retirement plan should prepare for the possibility of a retirement that could last 30 or 40 years. Over this lengthy span of time, the steady erosion of purchasing power due to the effects of inflation should be of more concern to retirees than shorter-term market volatility.

The road of retirement should be paved with more than good intentions. Soon-to-be retirees need to develop and follow a retirement income plan that balances current lifestyle and long-term sustainability of the retirement portfolio. The *Road of Retirement* series provides some best practices for accomplishing this balance.

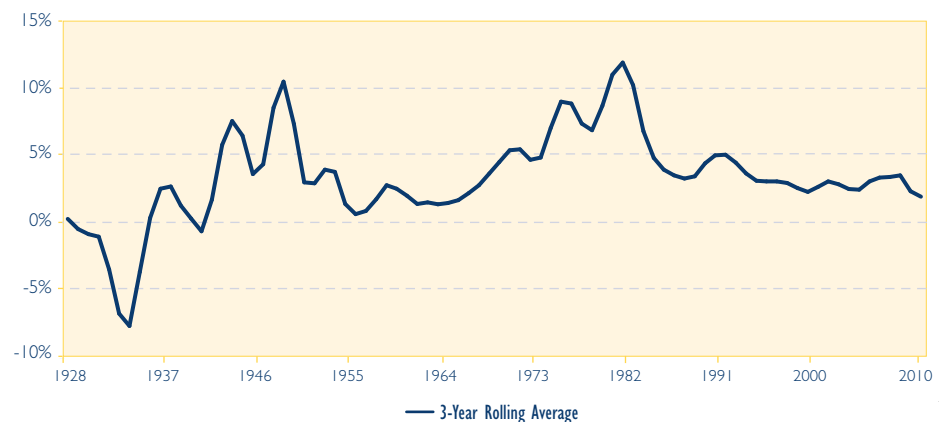
Purchasing power is the value of a dollar relative to the amount of goods or services that it can buy at a given time. This is very important to retirees because, all else being equal, inflation can steadily erode the amount of goods and services that a dollar can purchase over time.

Inflation is typically measured by changes in the consumer price index (CPI) maintained by the U.S. Bureau of Labor Statistics (BLS). Although there are several indices maintained, the one most commonly referred to is the CPI-U, which measures the inflation for all urban consumers. For the 83-year period of 1928–2010, average annual inflation has been 3.15%. However, as illustrated in **figure one**, inflation for shorter periods can be quite different.

Baby-boomer retirees may be particularly susceptible to the eroding effects of inflation, given that they will be less likely than past generations to have some form of pension

that could be indexed for inflation. This generation is relying more on savings accumulated in 401(k), 403(b), IRA, and after-tax savings accounts to support them in retirement. Unless these savings are prudently invested during retirement to allow the income stream to grow at a pace comparable with the increase in inflation, purchasing power will be diminished. To illustrate this concept (**figure two**), let's use a simple hypothetical case of a retiree who has \$1 million in retirement savings and has decided to spend the amount evenly over a 30-year period (\$33,333 per year). The retiree also decides not to invest the money to ensure safekeeping. Over the next 20 years, at an average annual inflation rate of 3%, purchasing power drops by 43% to the equivalent of \$19,010 per year, and if inflation runs at 4% annually, purchasing power declines by 52% to \$15,821. Imagine retiring at age 62 and by age 82 only being able to spend the equivalent of \$15,821 per year in today's dollars!

**FIGURE 1. CHANGES IN THE ALL URBAN CONSUMER PRICE INDEX (CPI-U) - 1928 TO 2010**

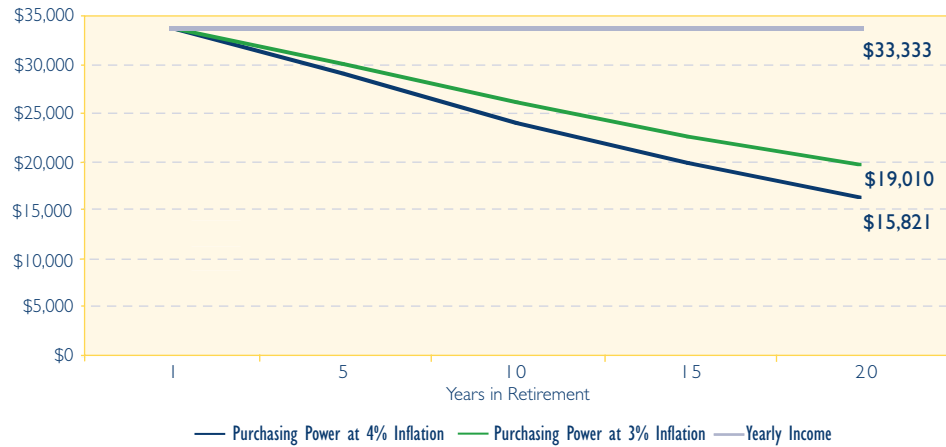


Source: Thornburg Investment Management



For retirees, risk should be viewed as the probability of not providing for a sustainable 30-year retirement. In the example in *figure two*, the retiree believes that they are being risk averse by not being invested, therefore becoming completely exposed to the steady eroding effects of inflation. Therefore, under this scenario, the only option for keeping pace with inflation is to spend a little more of the savings each year to cover the increase in the cost of living, which will result in the retirement savings being depleted earlier than planned.

**FIGURE 2. ERODING PURCHASING POWER FROM INFLATION**



Source: Thornburg Investment Management

The typical baby-boomer who is looking to retire in the coming years will more than likely want to use a higher initial spending rate than 3.33% (\$33,333 divided by \$1 million in retirement savings), used in the example above. Often, retirees will choose a withdrawal rate of 4% to 5% with an annual cost of living adjustment to account for inflation. One key factor that retirees should consider is how much investment return will be needed to support their desired withdrawal level. Knowing what minimum return will be required to achieve a realistic retirement plan is a key piece of information that every retiree should know. We will refer to this minimum return required as the “**real return hurdle**”, which is the minimum return, after accounting for investment expenses, taxes, and inflation<sup>(1)</sup> needed to provide the time frame, spending level, and legacy amount chosen for the retirement plan.

To calculate the real return hurdle, there are three basic variables that a retiree needs to factor: the length of time to be spent in retirement; the initial spending rate desired; and a legacy, if any, that the retiree wishes to leave. Each of these variables is described below.

- **Time Frame** – the longer a retiree plans for their retirement to last, the more investment earnings are needed to support it. For retirement planning purposes, most advisors will use a minimum of 30 years, but in some instances 40 years may be more realistic.
- **Spending Rate** – the first year’s after-tax spending amount (say \$40,000) divided by the total retirement savings (say \$1 million) for a 4% initial spending rate.
- **Legacy** – how much of the initial retirement savings account is desired to be left as a gift to family members or charity upon the end of the retirement period.

Combining these three factors and preparing a simple cash flow model yields a real return hurdle that must be achieved or exceeded each year to provide a retirement that will sustain itself for 30–40 years and beyond. The following grid

illustrates the real return hurdle at a 4% and 5% initial spending rate assuming that all the retirement savings will be used to support the retirement plan with no legacy amount specified.

**FIGURE 3. REAL RETURN HURDLES**

Plan Duration	4% Spending Rate	5% Spending Rate
30 Years	1.22%	2.84%
40 Years	2.52%	3.93%

For instance, a retiree with a \$1 million retirement portfolio who wishes to plan for a 30-year retirement and desires to spend \$50,000 (5%) a year after taxes and indexes to inflation, would need to achieve a real return hurdle of 2.84%. Reduce the initial spending level to \$40,000 (4%) and the real return hurdle drops to 1.22%. Keep in mind that when we are looking at after-tax spending amounts here, this assumes that any taxes due each year are paid from the assets in the investment portfolio, not from the spending amounts being taken from the portfolio.

For a majority of the baby-boomers retiring in the coming years, most, if not all, of the retirement savings accumulated during retirement plus the future earnings on these savings will be spent over their planned retirement period. The concept of spending some, if not all, of the retirement savings to fund a retirement will be the norm, not the exception. For these retirees, a legacy amount will be available only if they do not use all their financial resources due to an unusually strong investment market or if spending amounts are actually less than planned. However, for those retirees who want to plan a legacy at the beginning of the retirement plan, the following analysis shows what real return hurdle would be required to provide for a sustainable spending plan, plus leave a legacy at the end of the 30-year plan. Needless to say, higher returns are required to achieve both objectives, as illustrated in *figure four*. The planned legacy amount in the left column is expressed as a percentage of the initial retirement savings and is not increased to account for inflation.

**FIGURE 4. REAL RETURN HURDLES TO LEAVE A LEGACY**

Legacy	4% Spending Rate	5% Spending Rate
100%	4.00%	5.00%
75%	3.52%	4.60%
50%	2.94%	4.13%
25%	2.21%	3.56%

For a retiree who wants an initial spending rate of 5% and also desires to leave 25% of the initial portfolio value as a legacy, this will require a real return hurdle of 3.56%, as compared to 2.84%, from **figure three**, showing no legacy. As the desired legacy amount increases, so does the real return hurdle required. Note that this chart pertains to a 30-year retirement plan, so if a 40-year plan is desired, these real return hurdles will go even higher.

Let's use these real return hurdles in a hypothetical example assuming that a retiree wishes to use the following plan assumptions.

- **Time Frame** – 30-year retirement period.
- **Spending Rate** – 5% initial spending rate, indexed to inflation.
- **Legacy** – 25% of initial retirement savings.

Per **figure four**, the retiree has a 3.56% real return hurdle to achieve these goals. The next step is to assess the retiree's costs. Let's assume the following:

- **Investment Expenses** – the retiree is paying the financial advisor 1% of their assets under management per year. All other costs are included in the net return.
- **Tax Cost** – the tax accountant and financial advisor estimate that a 25% tax bracket/cost is a good estimate.
- **Annual Inflation** – the financial advisor assumes long-term inflation to be 3.0%.

Now that we know the retiree's cost, converting a nominal return to a real return for comparison to the real return hurdle is straightforward. Assume a portfolio allocation is being considered that has a targeted 8% nominal return. The nominal return, in the hypothetical investment in **figure five**, is converted into a real return of 2.25%. Will this be sufficient to meet or exceed the real return hurdle of 3.56%?

Comparing the real return of 2.25% to the 3.56% real return hurdle the retiree needs to achieve gives you a quick gauge that the plan is probably not realistic. Either the retiree will need to lower their expectations for the amount of the legacy, lower spending expectations or the portfolio needs to include more investments with the possibility for higher returns. In doing this analysis, it is important to remember that the two most important variables, nominal returns and inflation, are based upon historical experience and are impossible to accurately predict for the future. With that being said, historical information is the only information we have for this purpose.

**FIGURE 5. REAL RETURN HURDLE VERSUS NOMINAL RETURN**

Targeted Nominal Return	8.00%
Investment Expenses	-1.00%
Return After Investment Expenses	7.00%
Estimated Tax Cost*	-1.75%
Net Return after Expenses & Taxes	5.25%
Annual Inflation (CPI-E)	-3.00%
Real Return	2.25%

\* Assumes investment expenses are tax deductible and 25% of 7.00% equals 1.75%.

Once the analysis is complete, retirees should examine investment returns published by the financial press in a new light. They should be comparing how these investments may help achieve the long-term retirement plan's real return hurdle.

In summary, planning for a 30- to 40-year retirement period makes preserving purchasing power of paramount importance. Being able to see how the retirement plan variables relate to a real return hurdle is a great first step. Going through the process of identifying each retiree's unique cost structure, including inflation assumptions, investment expenses, and taxes, will determine how the real return from an investment compares to the real return hurdle needed to accomplish the plan. Using a knowledgeable financial advisor will be critical to creating and monitoring a retirement portfolio to meet the plan objectives.

Please note that any discussion related to average returns over a long period of time, such as a 30- to 40-year retirement, needs to be accompanied by a good understanding of the order in which returns are realized, called the "sequence of returns". For a retiree who is liquidating a small amount of their retirement savings each year to support their expenses, the order in which returns are realized is very important. We have addressed this sequence of return issue as a separate piece in this kit and it should be deemed an integral part of the discussion on preserving purchasing power.

**Disclosures:**

Following this strategy does not assure or guarantee sustainability of a retirement portfolio, better performance, or protect against investment losses.

Investing carries risks, including possible loss of principal. Investments are not FDIC insured, nor are they deposits of or guaranteed by a bank or any other entity.

Diversification does not assure or guarantee better performance and cannot eliminate the risk of investment losses.

Expected returns cannot be guaranteed and future returns cannot be predicted. Past performance does not guarantee future results.

The views expressed in this article are subject to change.

(1) See Thornburg's June 2010 "Study of Real Real Returns" (returns after inflation, taxes, and investment expenses) for additional insights into what asset classes have provided the more attractive *real* real return over time.

A cash flow model uses the amount of initial savings available, the annual cash flow needed and legacy desired to solve for the internal rate of return.

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 performance of any index is not indicative of the performance of any particular investment. Unless otherwise noted, index returns reflect the reinvestment of income dividends and capital gains, if any, but do not reflect fees, brokerage commissions or other expenses of investing. Investors may not make direct investments into any index.

Nominal return is the rate of return on an investment without adjusting for inflation.

*Before investing, carefully consider the investment goals, risks, charges, and expenses. For a prospectus containing this and other information, contact your financial advisor. Read it carefully before investing.*