

Working Longer and Other Ways to Optimize Retirement Income

With the oldest baby boomers hitting 62 this year, and more than 70 million of them likely to enter retirement over the next 20 years, the hard truth is that only a small minority are accumulating enough savings to provide for their income needs during decades in retirement.

This uncomfortable reality is particularly true given the overall rise in life expectancy, sharply rising medical costs, the trend toward more active and costly retirement lifestyles, and, not least, the relentless toll of inflation.

For the financially fortunate with sufficient personal savings, Social Security benefits, and corporate pensions to meet all their retirement income needs, the main financial challenges of retirement are how to invest and spend wisely and perhaps provide for their heirs as well.

However, more than 75% of all workers age 55 or older report having less than \$250,000 in investments apart from their homes and pensions, according to a recent survey by the Employee Benefit Research Institute (EBRI). At a recommended initial withdrawal amount of 4%, that provides an income from their investments of just \$10,000 in the first year of retirement.

Nevertheless, those approaching retirement can improve their income and financial security in retirement depending on their flexibility and their approach to four big decisions that are usually under their control:

- When they stop working.
- When they start taking Social Security.
- How they manage withdrawals from their savings.
- How they allocate their assets.

The first two can have a significant impact on the amount of income in retirement, while the second two affect the sustainability of that income over a 30-year retirement.

“Taken together, controlling these decisions will go a long way toward determining retirees’ overall security in retirement,” says Christine Fahlund, a senior financial planner at T. Rowe Price. “Careful planning helps preretirees do a better job of optimizing their resources so that they can live with fewer worries and greater opportunities.”

Working Longer

Generally, Ms. Fahlund says that “no single decision will improve preretirees’ potential retirement security as much as continuing to work even a few more years beyond the anticipated retirement date.”

Appealing or not, this is usually the best option for those who come up short on retirement savings.

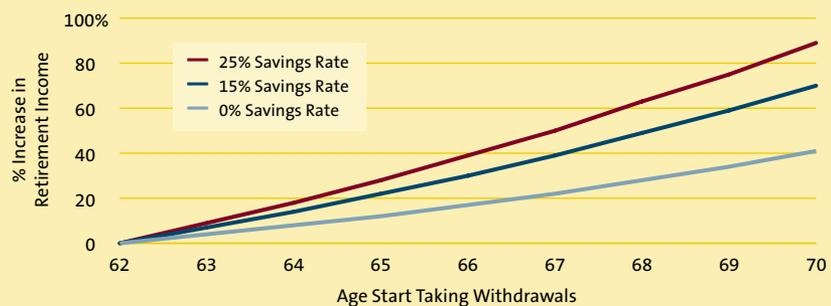
Unless preretirees enjoy a windfall or a sharp rise in their incomes late in their careers, those just a few years from retiring who have not saved enough will probably not be able to make up their shortfalls solely with increased savings levels or by investing more aggressively. They simply will not have enough time for their assets to compound.

T. Rowe Price studies show:

- The long-term impact of a greater rate of savings at this late stage—even boosting saving from 15% of one’s salary to 25%, for example—is certainly positive but relatively marginal in terms of increasing annual retirement income from investments in just a few years.

The Impact on Retirement Income of Working and Saving Longer

Cumulative Percentage Gain in Retirement Income From Investments at Two Savings Rates (Current Dollars)



This chart shows the cumulative percentage increase in retirement income from an investment portfolio for each year the individual continues to work beyond age 62, depending on whether 25%, 15%, or 0% of wages is invested each year. All figures are in current dollars. The study assumes an annual salary of \$100,000; \$500,000 in tax-deferred savings at age 62; an annual inflation rate of 3%; an asset allocation of 40% stocks, 40% bonds, and 20% short-term bonds and cash; and a 90% probability that income will be sustained until at least age 95. Portfolio performance is based on a probability analysis described on page 18.

So, for example, if this individual worked until 65, his or her annual retirement income from investments would be 28% greater than if he or she had retired at 62, assuming he or she saved 25% of his or her salary each year. Even if none of the annual earnings were saved, the individual’s income would be 12% greater at 65 because he or she did not have to tap into his or her retirement savings while continuing to work.

Source: T. Rowe Price Associates.

- Likewise, those who invest more aggressively as they approach retirement—moving, say, from 60% of their portfolio assets in equities to 70% or more—also are not likely to make up for lost time. And because of potentially greater investment volatility, this step could actually cause their portfolio balances to drop significantly just before or after their desired retirement date.
- On the other hand, continuing to work full time could increase preretirees’ expected annual retirement income *from their investments, in today’s dollars*, by about 7% for each additional year of work and contributions. Working an additional three

years—say from ages 62 to 65—and continuing to save 15% of salary could raise annual income from investments by 22%, or by 39% after working an additional five years. (See chart on page 14 for underlying assumptions.)

- And if this individual worked an extra five years and boosted his or her savings to 25% of annual earnings, his or her annual retirement income from savings would be 50% higher than if he or she had retired at age 62.

The logic behind this is simple: Those who continue working can contribute to their savings for a few more years, delay tapping into their nest eggs, and reduce the number of years that their assets will have to generate income in retirement—a powerful combination.

Moreover, as discussed next, this strategy may enable them to delay when they start taking Social Security benefits, which can significantly increase those payments.

Also, those who continue working may receive health and life insurance and prescription drug benefits from their employers—all expenses that more and more retirees have to cover themselves. (Retirees are not eligible for Medicare until age 65.)

“Delaying retirement does not necessarily mean delaying gratification,” Ms. Fahlund says. One novel strategy that can both boost retirement income and make working longer more palatable involves *spending more, while still working*, on hobbies, travel, education, or other retirement dreams rather than investing the additional earnings from work.

This strategy could still increase retirement income from investments by 4% per year, or about 12% after three years, because the retiree would not have to tap into existing savings.

While many retirees may not want or be able to continue working in their same jobs full time, they could still improve their potential income in retirement by working part time in the same or another job.

Although wages are likely to be reduced with part-time work, the same potential financial dynamics apply: Every dollar earned is one that doesn’t have to be withdrawn from retirement savings. Indeed, \$20,000 in annual income from a part-time job is the equivalent of withdrawing 4% a year from an additional \$500,000 in savings.

“As you near retirement, you may want to consider phasing it in rather than simply stopping work altogether, or possibly switching to another more enjoyable type of work,” Ms. Fahlund suggests. “This approach may allow you to spend more time on new pursuits while growing the assets you will need to draw on later.”

Social Security

For most people 65 and older, Social Security is the largest single source of their income, accounting for 40% on average, according to the EBRI.

Delaying taking Social Security benefits can significantly increase a retiree’s income. For example, those benefits (in today’s dollars) increase approximately 8% per year based on Social Security Administration formulas.

Thus, delaying three years (from 62 to 65) results in a 27% increase in the purchasing power of a retiree’s Social Security benefits, and delaying until age 70 almost doubles the purchasing power of these benefits (about 88%). (See chart on this page.) The potential gain in actual benefits could be even higher because Social Security benefits are adjusted annually for inflation.

The Impact of Delaying Social Security Benefits

| Age Benefits Begin | Annual Social Security Payment | % Increase Over Benefit at Age 62 |
|--------------------|--------------------------------|-----------------------------------|
| 62 | \$17,772 | |
| 63 | 19,044 | 7% |
| 64 | 20,832 | 17 |
| 65 | 22,644 | 27 |
| 66 | 24,468 | 38 |
| 67 | 26,664 | 50 |
| 68 | 28,884 | 63 |
| 69 | 31,128 | 75 |
| 70 | 33,408 | 88 |

Social Security payments calculated using the Quick Calculator on the ssa.gov Web site. This assumes an individual who is currently age 62 (with a full retirement age of 66) who is continuing to work and earning \$100,000 each year until benefits begin. All figures reflect current dollars. Actual benefits would be higher to reflect future adjustments for inflation.

Each year this individual continues working, his or her annual retirement income from Social Security would increase by about 8%, regardless of how much of his or her additional wages he or she saves annually.

Sources: T. Rowe Price Associates and Social Security Administration.

Optimizing Retirement Income

Continued from page 15

Taking all three steps to increase potential retirement income—continuing to work and save at a 15% rate and delaying Social Security—could increase the purchasing power of total retirement income *from retirees' combined investments and Social Security benefits* by about 8% for each year after 62, or 25% in three years (as reflected in the chart on this page, which also provides the underlying assumptions).

And doing that from ages 62 to 70 would almost double *total retirement income* from investments and Social Security in today's dollars.

To boil this down, here is another way of looking at the overall benefit of working longer and delaying Social Security benefits. If a 62 year old wants about a 30% increase in the purchasing power of his or her *retirement income* from investments and Social Security, then he or she could:

- Retire in three years at 65 by saving 25% of his or her salary annually.
- Retire in three and a half years at 65 and a half by saving 15% of his or her salary annually.
- Retire in four years at 66 by spending rather than saving his or her additional earnings.

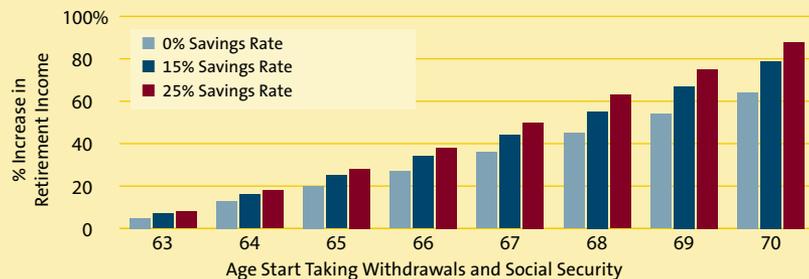
(These illustrations assume that the retiree does not begin taking Social Security until he or she stops working.)

Keep in mind that, for those who continue working and begin Social Security benefits prior to attaining full retirement age (66 for most boomers), some benefits could be temporarily withheld depending on the amount of wages earned.

In general, analyzing whether preretirees should decide to take benefits early, at age 62, or whether they would be better off in the long

The Combined Impact of Working Longer and Delaying Social Security

Cumulative Increase in Retirement Income From Investments and Social Security for Each Year After Age 62



This chart shows the cumulative percentage increase in total retirement income from both working and saving longer and delaying Social Security for each year beyond age 62, depending on whether 25%, 15%, or 0% of wages is invested each year. The assumptions are the same as for the charts on pages 14 and 15 that show gains just from working longer or from delaying Social Security benefits.

So, for example, if this preretiree worked until age 65, his or her annual combined retirement income from investments and from Social Security would be 28% greater than if he or she had retired at 62, assuming he or she saved 25% of his or her salary each year. Even if none of the annual earnings were saved, the preretiree's income would be 20% greater at 65 because he or she did not have to tap into his or her retirement savings while continuing to work, and he or she delayed taking Social Security benefits, which increase in value for each year they are postponed until age 70. If this individual worked until 67 and saved 25% of salary, his or her combined retirement income would be 50% greater than at 62.

Source: T. Rowe Price Associates.

run by waiting for increased benefits until as late as age 70 really depends on whether they can afford to delay receiving benefits, whether they are married, and, to some extent, how long they expect to live.

It's often easy to underestimate longevity, particularly because married couples may neglect to take into account their joint life expectancy when it comes to Social Security. T. Rowe Price financial planners, relying on various actuarial studies, urge married investors to plan for at least one spouse living until 95.

"Many financial planners used to recommend taking your Social Security benefits as soon as you become eligible," Ms. Fahlund says. "But today, with greater longevity, delaying Social Security for as long as possible may be the best strategy if you can afford it.

"But whatever you do," she cautions, "take extreme care when making Social Security benefit decisions, not least because the annual

amounts of payments (adjusted for inflation) for which you will be eligible generally will be locked in for the remainder of your life and for the remainder of your surviving spouse's life, except in certain circumstances."

Taking Withdrawals

The third and fourth major decisions faced by preretirees—their withdrawal amounts and their portfolio's asset allocation in retirement—boil down to figuring out how to maximize the amounts they can withdraw initially from their retirement savings without running out of money during their lifetimes.

While working longer, saving more, and delaying Social Security benefits can increase total retirement income, deciding on an appropriate initial withdrawal amount from portfolio assets and adjusting that amount as necessary can go a long way toward lowering the risk that retirees outlive their resources.

In most cases, “your ability to avoid running out of money is driven more by your initial and subsequent withdrawal amounts than by your asset allocation strategy, which for many investors is counter-intuitive,” Ms. Fahlund says.

T. Rowe Price simulation studies show that:

- For a 30-year retirement, an initial withdrawal amount of 4% from a balanced portfolio of assets (with 3% annual increases in the withdrawal amount for inflation) would provide as high as an 89% chance of having assets remaining at the end of this period. A 5% initial withdrawal amount with inflation adjustments, on the other hand, reduces these odds to a range of 40% to 65%, depending on the asset allocation strategy.
- If retirees suffer poor portfolio returns in the first few years of retirement, they should consider lowering their withdrawal amounts temporarily or at least holding their annual withdrawals flat for a while instead of increasing them for inflation. Extensive analysis by T. Rowe Price has demonstrated

that this approach is much more advantageous than, for example, attempting to counteract a market downturn by dramatically reducing the level of equities—and hence the long-term growth potential—in retirees’ portfolios.

“No analysis can cover every contingency,” Ms. Fahlund says. “But, in general, an initial 4% withdrawal amount gives preretirees a high probability of not having to worry about depleting their assets too quickly, unless they retire into a severe bear market.”

(Please see important disclosures about this study on page 18 of this report.)

Asset Allocation

In general, making minor adjustments to a balanced portfolio in retirement has less impact on financial security than the other three decisions.

However, preretirees often make the serious mistake of assuming that the safest path in retirement is minimizing equity exposure to lower their market risk. Instead, moderate exposure to equities is

recommended for diversification, growth potential, sustaining real income, and providing a “cushion” to cover unexpected expenses during a 30-year retirement.

Also, to increase the potential wealth that retirees could draw on in emergencies—or to possibly leave more money to heirs—retirees could opt for somewhat higher allocations to equities, though that does carry greater risk in market downturns.

Ms. Fahlund advises retirees to maintain at least a 40% allocation to equities, even into their 80s, and keep no more than 30% of their assets in cash or short-term bonds.

“The bottom line,” she says, “is that if you have too much set aside for emergencies in cash, which usually has a very modest annual return, you run the risk of not keeping up with inflation and possibly running out of resources from which to take withdrawals. And if you have too much invested in stocks, you lessen your ability to cope with market uncertainties and run the risk of having to sell equities during a market setback to provide for income or unexpected contingencies.

“The answer is to maintain a balanced, diversified portfolio—with moderate growth potential and a moderate risk profile.

“With all of these critical decisions—when to stop working, when to start taking Social Security, how much to withdraw from your portfolio in retirement, and determining the right asset allocation strategy—the overarching concepts are to maintain flexibility in your plans for retirement and make thoughtful decisions regarding financial matters that are under your control,” she adds.

“Such preretirement planning can help optimize your financial prospects for years to come.” 🐘

How Much Can You Withdraw in Retirement?

The estimated probability of maintaining several initial withdrawal amounts throughout a 30-year retirement without running out of money, depending on the investor’s asset allocation. This analysis assumes pretax withdrawals from tax-deferred assets and can be applied to any size retirement portfolio. In this study, the annual withdrawal amounts are increased by 3% for inflation.

| First-Year Withdrawal Amount | 30-Year Retirement Period | | | |
|---------------------------------|---------------------------|-------|-------|-------|
| | Stock/Bond Mix | | | |
| | 80/20 | 60/40 | 40/60 | 20/80 |
| | Simulation Success Rate* | | | |
| 7% | 28% | 19% | 7% | 1% |
| 6 | 45 | 38 | 24 | 7 |
| 5 | 65 | 63 | 57 | 40 |
| 4 | 84 | 87 | 89 | 89 |

*The probability of having at least \$1 in the portfolio at the end of 30 years. The probability analysis used for determining this is explained on page 18.

Source: T. Rowe Price Associates.

Explaining Monte Carlo Analysis Used in Retirement Study

Monte Carlo simulations model future uncertainty. In contrast to tools generating average outcomes, Monte Carlo analyses produce outcome ranges based on probability—thus incorporating future uncertainty. In this example, savings data are based on average outcomes and retirement income data on Monte Carlo analysis.

Material Assumptions Include:

- Underlying long-term expected annual returns for the asset classes are not based on historical returns, but estimates, which include reinvested dividends and capital gains.
- Expected returns—plus assumptions about asset class volatility and correlations with other classes—are used to generate random monthly returns for each class over specified time periods.
- These monthly returns are then used to generate hundreds of scenarios, representing a spectrum of possible performance for the modeled asset classes. Success rates are based on these scenarios.
- Taxes aren't taken into account, nor are early withdrawal penalties. But fees—average expense ratios for typical actively managed funds within each asset class—are subtracted from the expected annual returns.

Material Limitations Include:

- Extreme market movements may occur more often than in the model.
- Some asset classes have relatively short histories. Expected results for all asset classes may differ from our assumptions—with those for classes with limited histories potentially diverging more.
- Market crises can cause asset classes to perform similarly,

lowering the accuracy of projected portfolio volatility and returns. Correlation assumptions are less reliable for short periods.

- The model assumes no month-to-month correlations among asset class returns. It does not reflect the average periods of “bull” and “bear” markets, which can be longer than those modeled.
- Inflation is assumed constant, so variations are not reflected in our calculations.
- The analysis does not use all asset classes. Other asset classes may be similar or superior to those used.

Model Portfolio Construction

Seven model portfolios were designed for effective diversification among asset classes. Diversification theoretically involves all asset classes: equities, bonds, real estate, foreign investments, commodities, precious metals, currencies, and others. Because investors are unlikely to own all these assets, we selected those most appropriate for long-term investors: stocks, bonds, and short-term bonds. We then chose seven sub-asset classes for the model portfolios: large-cap, small-cap, and international stocks and short-term, investment-grade, high-yield, and international bonds. We did not consider real estate because of its illiquidity and investors' potential exposure from home ownership. We believe the selected fixed-income sub-asset classes fairly represent the domestic capital markets. Short-term, investment-grade bonds were chosen for stability, eliminating a cash allocation because investors are best able to decide that according to their near-term needs. The portfolios were built using the

complementary behavior of sub-asset classes over long periods of time, enabling more efficient investment mixes through low correlations.

The initial withdrawal amount is the percentage of the initial value of the investments withdrawn on the first day of the first year. In subsequent years, the amount withdrawn grows by a 3% annual rate of inflation. Success rates are based on simulating 500 market scenarios and various asset allocation strategies. The underlying long-term expected annual return assumptions (without fees) are 10% for stocks; 6.5% for intermediate-term, investment-grade bonds; and 4.75% for short-term bonds. Net-of-fee expected returns use these expense ratios: 1.211% for stocks; 0.726% for intermediate-term, investment-grade bonds; and 0.648% for short-term bonds.

IMPORTANT: The projections or other information generated by the T. Rowe Price Investment Analysis Tool regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. The simulations are based on assumptions. There can be no assurance that the projected or simulated results will be achieved or sustained. The charts present a range of possible outcomes. Actual results may vary with each use over time, and such results may be better or worse than the simulated scenarios. Clients should be aware that the potential for loss (or gain) may be greater than demonstrated in the simulations.

The results are not predictions, but they should be viewed as reasonable estimates. 🐼