How the Personalized Retirement Income Calculator Works

The JHI Retirement Income Calculator helps users estimate whether their retirement savings may support their desired income through retirement. Users enter core planning information, including age, income, savings, retirement age, Social Security assumptions, state of residence, expected retirement spending and investment strategy. The calculator converts these inputs into a retirement profile and tests how the plan may perform under different market, inflation, tax and longevity assumptions.

The calculator projects savings from today through retirement, estimates income from Social Security and other sources, applies relevant tax and cost-of-living assumptions, and identifies how much may need to be withdrawn from savings each year. It then runs more than 1,000 Monte Carlo scenarios, each representing a possible retirement path under different return and inflation conditions.

The main result is the success rate: the percentage of simulated scenarios in which the user's money lasts through the selected plan-through age. For example, an 80% success rate means the plan succeeded in about 8 out of 10 simulated futures. The output is intended for education and planning support and should not be read as a guarantee of future outcomes or personalized financial advice.

Behind-the-Scenes Calculations

Once the user submits their information, the calculator builds a retirement profile. It estimates the years until retirement, the length of the retirement period, projected savings at retirement and expected income from Social Security, partner Social Security, pensions, rental income or other sources. It also applies the user's selected investment approach before and after retirement, using different return and risk assumptions for Conservative, Moderate and Aggressive strategies.

The calculator then estimates the retirement income need. If the user enters a desired monthly retirement budget, the tool converts it into an annual spending target, adjusts for state cost-of-living differences where applicable, increases it over time for inflation, and estimates taxes using federal and state tax assumptions.

During each simulation, the calculator separates savings into account types such as traditional retirement accounts, Roth accounts and taxable brokerage accounts. In Quick Plan, it uses a default account split; in Detailed Plan, it uses the balances and contribution amounts entered by the user. Before retirement, it grows accounts and adds contributions. During retirement, it subtracts withdrawals, estimates taxes and tracks whether assets remain through the plan-through age.

Withdrawals are modelled in a tax-aware order, generally drawing first from taxable brokerage assets, then traditional retirement assets and then Roth assets. Across the simulations, the calculator records whether the plan succeeds, when assets may be depleted, what ending balances may look like and how outcomes vary under stronger or weaker market conditions.

Monte Carlo Simulations

A Monte Carlo simulation tests many possible future outcomes rather than assuming a single forecast. This is useful because retirement planning depends on variables that cannot be known with certainty, including investment returns, inflation, taxes, spending needs and how long savings must last.

For a novice user, each simulation can be understood as one possible version of the future. One scenario may assume stronger markets and moderate inflation, while another may assume weaker markets, higher inflation or greater pressure from withdrawals. Running more than 1,000 scenarios helps ensure the result is not based on a single optimistic or pessimistic assumption.

After all scenarios are complete, the calculator counts how many supported the desired retirement income through the selected plan-through age. If the plan succeeds in 800 out of 1,000 scenarios, the success rate is 80%. This does not mean the user has an 80% guarantee; it means the plan worked in about 8 out of every 10 simulated futures based on the calculator's assumptions.

The value of Monte Carlo analysis is that it highlights both resilience and risk. A high success rate suggests the plan may be durable across many market environments. A lower success rate may indicate that the user should consider saving more, retiring later, lowering spending, adjusting the Social Security claiming age or reviewing the investment strategy.

What the User Sees in the Output

The results page translates the calculations into a practical retirement outlook. The primary output is the success-rate gauge, supported by projected monthly and annual income, estimated savings at retirement, median ending balance, average annual taxes, cost-of-living assumptions and the amount that may need to come from savings each year.

Supporting visuals and tables provide additional context, including portfolio balance projections, downside and upside portfolio paths, strategy comparisons, survival probabilities at key ages, Social Security claiming comparisons, account-level withdrawal guidance, a year-by-year analysis table and a personalized retirement summary. Together, these outputs help the user understand whether the plan appears on track, where gaps may exist and which actions could improve the outcome.

Because future markets, inflation, taxes, spending needs and personal circumstances can change, the calculator is best used as a directional planning tool that can be revisited as the user's situation evolves.