



Ally Invest Personal Advice and Guided Advice

Monte Carlo Assumptions and Methodology

IMPORTANT: The projections or other information generated by any Monte Carlo simulation regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results and are not guarantees of future results or the full attainment of your goal. There is no guarantee that the results generated by this simulation will be achieved or sustained, and results may vary with each use. Projections are based on assumptions provided by you and your advisor and are not guaranteed. Any underestimations or overestimations of data entered by you could drastically change the recommendations made by your financial professional. It is important to update your financial information frequently. The results of this simulation are based on assumptions for, among other things, historical investment performance, client savings rates, average inflation rates and estimated tax rates. In addition, investment expenses have not been considered in any of the calculations. Actual results will vary, perhaps to a significant degree. The projected reports are hypothetical in nature and for illustrative purposes only.

What is Monte Carlo Simulation

Monte Carlo is a process that is used to conduct a statistical analysis of a client's portfolio to determine the probability of the client achieving their goal. Monte Carlo simulations are used to show how variations in rates of return each year can affect your results. A Monte Carlo simulation calculates the results by running it many times, each time using a different sequence of returns. Some sequences of returns will give you better results, and some will give you worse results. These multiple trials provide a range of possible results, some successful and some unsuccessful. The percentage of trials that were successful is the probability that your assumptions could be successful.

Methodology

The investment returns for each year are calculated from the return of each asset class for that year and the asset allocation of each account. Asset class returns are generated from a random distribution. Each asset class is linked to an index, or a set of indices, with an assumed mean return and standard deviation. Using a correlation matrix between all the asset classes, and assuming a normal distribution of returns, we generate random returns for each year of the simulation. We run 250 trials each time using a different set of asset class returns taken from the distribution. At the end of the simulation, we calculate the percentage of trials in which the client was able to cover all of their expenses until the end of their goal. This is the probability of success.

Assumptions

The Monte Carlo simulation uses asset class returns, not returns of actual investments. The projected return assumptions used in the simulation are estimates based on average annual returns for each asset class. The portfolio returns are calculated by weighting individual return assumptions for each asset class according to your portfolio allocation. The portfolio returns assume reinvestment of interest and dividends at net asset value without taxes. All results use assumptions that do not completely or accurately reflect your specific circumstances. No simulation has the ability to accurately predict the future. As investment returns, inflation, taxes, and other economic conditions vary from the assumptions, your actual results will vary (perhaps significantly) from those presented in the simulation. Ally Invest Advisors Inc. "Ally Invest Advisors" or "we" utilizes a third-party Turnkey Asset Management Platform (TAMP) to deliver the Personal Advice and Guided Advice services. The TAMP provider is not affiliated with Ally Invest Advisors and does not provide recommendations for any products or securities.

Keep in Mind

All investments involve risk, including loss of principal. Asset allocation and diversification do not eliminate the risk of experiencing investment losses.

Ally Invest Advisors does not guarantee that the results of its advice, recommendations, or the objectives of a managed portfolio will be achieved. We make no assurance that the investment process will consistently lead to successful investing. Actual results of any individual client may differ substantially from any simulations shown for a portfolio and may include an individual client incurring a loss. Actual portfolio performance may differ as a result of account size, client-imposed investment restrictions, the timing of client investments, market, economic, and individual company considerations.

Market volatility may be more extreme than what is represented by the simulation. The accuracy of the simulation is reduced in periods of market crisis. The simulation does not consider all investments, and those not considered might have characteristics similar or superior to those analyzed in this report. The returns are not reflective of any specific product, and do not include any fees or expenses that may be incurred by investing in specific products. The actual returns of a specific product may be more or less than the returns used in this report. It is not possible to directly invest in an index. Financial forecasts, rates of return, risk, inflation, and other assumptions may be used as the basis for illustrations.

The simulation provides a snapshot of your current financial position and can help you to focus on your financial resources and goals, and to create a plan of action. Because the results are calculated over many years, small changes can create large differences in future results. You should use this information to help you focus on the factors that are most important to you.

The creation and results of any plan do not constitute legal or tax advice. You should consult with an attorney or an accountant for advice in those areas.

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