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Ally Invest Robo Portfolios

Monte Carlo Assumptions and Methodology

IMPORTANT: The projections or other information generated by the goal tracker 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. A number of factors make the calculated results uncertain, including the use of assumptions about inflation, returns and volatility of the market, and the investments underlying the portfolio. Advisory fees, fund expenses, and other fees are not included in the calculation and, if they were included, would reduce the returns. Results may vary with each use and over time.

Introduction

The goal tracker tool is designed to help show the possible future investment performance of an investment portfolio as well as track progress toward an investment goal. Using Monte Carlo simulation, this tool projects how your portfolio may perform over a range of various market outcomes, based upon the composition of your portfolio, your investment time horizon, and any contributions.

The tool also allows you to simulate the impact of any changes to these variables on your portfolio, so that you can make more informed decisions about your goals. It is important to note that this tool relies upon assumptions of capital market returns to provide hypothetical projections, does not reflect actual results, and is not a guarantee of future results. Results may vary with each use and over time.

What is Monte Carlo Simulation?

Monte Carlo simulation is a statistical technique that performs risk analysis by simulating a range of possible values, in this case capital market return estimates, among other things. The simulation uses variable inputs resulting in randomized return estimates used to create a probability of returns over time. Because Monte Carlo simulation depends upon the number of uncertainties and the values applied to them, a single Monte Carlo simulation involves thousands of iterations of possible outcomes before it is complete. This tool performs 10,000 simulations per projection.

The benefit of this technique is that we can provide a comprehensive view of possible outcomes for your portfolio. We tell you not only what can happen, but also the probability of each outcome. This provides a more realistic projection over a simple linear, compound return projection.

Projection Methodology

The goal tracker tool is intended to show possible future portfolio values in order to illustrate the impact of different contribution decisions, investment time horizons, and portfolio allocations. Actual individual investor performance will vary depending on market performance, the time of the initial investment, amount and frequency of contributions or withdrawals, allocation changes, taxes, advisory fees, fund expenses, and other fees.

The graph displays a full spectrum of possible outcomes, categorized into shaded regions depending on the probability of occurrence. The graph is segmented into a median line, darker-shaded upper region, and lighter-shaded lower region. The center line represents the median expected outcome or 50th percentile, meaning 50% of scenarios performed better than this level, and 50% performed worse than this level. The darker-shaded region represents the 75-90th percentiles, and the lighter-shaded region represents the 10-25th percentiles, representing the most extreme expected outcomes. As an example, the 10th percentile represents a weak market scenario, with 90% of all simulations performing above this level. Likewise, the 90th percentile represents an exceptionally strong market scenario, with only 10% of scenarios performing at or above this level.

The tool also provides an indication of whether the portfolio is on track to meet the goal target. This status assumes average market performance, using the 50th percentile projected value at the end of the investment period. The goal is considered on track when the final projected portfolio value for the 50th percentile meets or exceeds the goal target. The goal is considered off track when the final projected value for the 50th percentile is less than the goal target. In the event your goal is off target, you may consider increasing your contributions to the portfolio or extending your time horizon should your circumstances permit. The goal target is a user input, is not a recommendation, and may not be sufficient to meet actual spending or income needs.

If the current projection is considered off track, the tool provides tips designed to help bring the goal back on target. Two alternatives are suggested: increasing the current balance via a one-time deposit or establishing a recurring monthly deposit. Recommendations are based on the 50th percentile final portfolio value reaching the goal target amount. Saving recommendations assume your current portfolio and are not adjusted for inflation.

Capital Market Assumptions

Expected returns are based upon capital market assumptions for the asset classes that represent the allocation parameters of the Robo Portfolio, rather than for the exchange-traded funds ("ETFs") that represent the asset class. Capital market assumptions are based on 20 years of historical return data for the underlying asset classes. Capital market assumptions are updated annually.

Capital market assumptions are forecasts and subject to known and unknown risks, uncertainties, and other events which could result in the actual returns deviating substantially from our projections. Model outputs are not adjusted for inflation.

Limitations

Calculations assume the current model portfolio held. Positions held outside of the model portfolio, or any deviations from the model portfolio, will not be accounted for in our projections. If the Robo Portfolio changes over time or has different expected returns, outcomes may be adjusted. The tool is based upon current account value and does not take into consideration active recurring deposits or withdrawals. The model does not account for taxes, and all values are assumed to be pre-tax.

Projections do not include advisory fees, fund expenses, or other fees, which if included would reduce performance. Inputs are for simulation purposes only and cannot be saved using the current version of the tool. Any actions desired as a result of interaction with the tool will need to be initiated outside of the tool. All inputs will be reset back to their original state upon exiting the tool.

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 Inc. ("Ally Invest Advisors" or "we") 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 the historical performance shown for the hypothetical portfolio and may include an individual client incurring a loss. Actual Robo 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.

Advisory services are provided by Ally Invest Advisors, a registered investment adviser. Brokerage services are provided by Ally Invest Securities LLC. Ally Invest Advisors provides Robo Portfolios to customers who self-select their risk tolerance, time horizon, and other investment profile characteristics. Risks applicable to any Robo Portfolio include those associated with its underlying securities. Before you invest, you should carefully review and consider the investment objectives, risks, charges, and expenses of each ETF that is to be used within our Robo Portfolios. ETF trading prices may not necessarily reflect the net asset value of the underlying securities. ETFs may entail risks similar to direct stock ownership, including market, sector, or industry risks. Some ETFs may involve international risk, currency risk, commodity risk, and interest rate risk. For more information, see our **Wrap Fee Program Brochure**.