Robo advice products are a quality option for individual investors and perform in-line with the expectations of a low-cost, passive, well-diversified portfolio.

The Normalized Benchmark found in *The Robo Report* is best used to compare robo advisors to each other.

Research shows individual investors as a whole perform poorly and robo advisors can be a good, professionally managed alternative for self-directed investors.

Recently, *Advisor Perspectives* published two articles based on the data found in *The Robo Report* regarding the performance of robo advisors compared to our Normalized Benchmark. We feel it is important to introduce our perspective on the data in our report and respond to the conclusions drawn in the *Advisor Perspectives* articles written by Robert Huebscher and David Blanchett.

Both articles use the return of the robo advisor portfolio compared to the Normalized Benchmark, a benchmarking method we developed for the report. The Normalized Benchmark is a good tool for comparing total returns of the robo portfolios, but readers should be careful extrapolating the performance compared to the Benchmark as a judgment on the performance of robo advisors as a whole. One article draws the conclusion that underperformance compared to the Benchmark is evidence that robo-advice portfolios are not performing well. We disagree with this conclusion and believe that robo advice portfolios are quality, low-cost, well-diversified portfolios and perform well overall. We have not concluded in our most recent report, or previous reports that robo advisors produce poor performance.

First, the Normalized Benchmark in *The Robo Report* serves a specific purpose. It is important to understand the Benchmark in order to draw appropriate conclusions. Details of the construction and use of the Benchmark can be found on our website. The Benchmark was designed to allow for the comparison of portfolios with differing equity allocations. When opening robo portfolios to be tracked for the report, we aim to open a portfolio with a 60% equity allocation. For a variety of reasons specific to the provider or the account in our report, not all portfolios have 60% equity allocations. Because the equity allocation of a portfolio is a significant driver of returns, we developed a method called Normalized Benchmarking that allows portfolios with differing equity allocations to be easily compared.

On a high level, Normalized Benchmarking is the process of creating a benchmark that matches the portfolio at the equity-allocation level. This means that a 60% equity portfolio is compared to a 60% equity benchmark and that a 70% equity portfolio is compared to a 70% equity benchmark. To create this custom benchmark, an all-equity benchmark and an all-fixed income benchmark are first created. These equity and fixed income benchmarks are made up of commonly used, broadly diversified, low cost, passive ETFs. The equity and fixed income benchmarks are based on the average portfolio holdings seen within the robos that we cover. The equity and fixed income benchmarks have the same underlying assets and the same weights regardless of the portfolio for which it is created. Normalized Benchmarking modifies the ratio of the equity benchmark to the fixed income benchmark so that the total equity allocation matches the portfolio. By using the return above or below the Normalized Benchmark, our readers can compare total portfolio performance against each other despite possible differences in equity allocations. Additionally, the equity-only and fixed income-only returns of each robo portfolio are published in *The Robo Report*. These asset-specific returns give our readers an additional set of data points to compare portfolios against each other in a way that is not affected by differences in the percentage of equity in the portfolio.

Different benchmarks will show different views of a portfolio. If the goal is to determine whether a robo advisor is a good choice for an individual investor, it is important to ask the question of what alternative choices there are for that investor. Three primary alternatives we see for a robo investor are to manage their own assets in a self-directed portfolio, choose a target-date or balanced mutual fund that fits their risk profile, or to transfer assets to a traditional advisor. Traditional advisors typically have higher minimums, which make them unavailable to many robo clients. Additionally, traditional advice providers typically charge higher fees than most robo products.
We will first address the option of a self-directed portfolio. While many investors are savvy and are willing to invest the time and effort to properly self-manage their portfolios, research has shown individual investors, as a whole, typically underperform and are susceptible to a variety of behavioral shortfalls. Robo advice offers an extremely accessible entry point to a professionally managed portfolio and typically offers automated rebalancing, auto-deposits, and other features that introduce a disciplined approach to investing. Given the available research on how poorly self-directed investors perform, we believe robo-advice is a great alternative at a reasonable cost for self-directed investors. Additionally, evidence shows that robo-advisors are finding success at attracting self-directed clients onto their platforms.

Second, as David Blanchett's article dives into, average robo portfolio performance from our report falls in-line with the performance of similarly positioned balanced mutual funds, as we would expect. Robos do not appear to significantly outperform or underperform balanced fund managers. Robos typically do not employ complex trading or allocation strategies but instead seek to provide well-diversified passive portfolios, and we would expect these portfolios to perform similarly to other professionally managed portfolios with the same allocation. Furthermore, robo advice clients will likely have access to digital planning tools or live advice options to help them with setting goals and other non-asset management tasks. These other value-add services are not available to those that purchase balanced mutual funds.

The third alternative for many investors is a traditional advice relationship. It is very difficult to measure the performance of traditional advisors as a whole as there is little to no data about how traditional advisors have performed, however, given their higher fees, we do not see a reason to believe that traditional advisors would outperform robo advisors net of fees.

Generally speaking, we believe robo advisors are a quality option for individual investors. The performance of the robo advisors is in-line with what we would expect from a professionally managed, indexed, low-cost portfolio. These returns of these portfolios are likely a strong improvement over those of most self-directed portfolios. Robo portfolios' performance compared to the Normalized Benchmark should be primarily used to compare robos to each other and using the Benchmark to draw larger conclusions about robo advisors as a whole should be done carefully.

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