

The value of personalized advice

- Advisors and investors have long struggled with demonstrating the value of advice recommendations. Calculations of value are often anchored in investment performance and often underestimate the value of financial planning interventions not related to portfolio construction.
- Vanguard has introduced the Vanguard Financial Advice Model (VFAM), which allows us to quantify the value of a specific investor's financial plan relative to the current strategy.
- Personalization unlocks great value potential, as value varies based on the needs and circumstances of each investor. To illustrate, we use a case study approach to show how four hypothetical sets of clients would get value from different advice interventions. These case studies show values ranging from 83 to 285 basis points annually, but the value for any specific investor could be well above or below this range.
- Most investors can get substantial value from reasonably priced advice that helps them make financial decisions consistent with their goals and aspirations.

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Acknowledgment: The authors would like to thank Thomas Paradise of Vanguard's Enterprise Advice Methodology Group for his contributions to this research.

Introduction

What is the value of financial advice? This question is of utmost importance to financial advisors, investors, employer plan sponsors, and the finance industry in general. By putting a number on the value of their advice, financial advisors can surface the highest-value advice interventions and demonstrate their value to clients to retain and attract more business. Unadvised investors can learn whether financial advice is right for them. Advised investors can benefit from knowing how advice adds value for them in excess of the fees that advisors charge. Plan sponsors can consider the benefits of adding financial advice as part of their retirement plan offerings. Finally, with the proliferation of hybrid and robo-advisor offers, the financial advice

industry can be cognizant of its different cost-to-serve models according to the value its different services provide.

Historically, the financial advice industry anchored on investment performance as the main source of advice value. In 2001, Vanguard introduced a concept called Advisor's Alpha, which outlined how advisors could add value through relationship-oriented services, rather than solely focusing on portfolio management (Bennyhoff and Kinniry, 2018). Since then, we have expanded on these concepts and been joined by many other researchers who have taken various approaches to defining and measuring the value that advisors deliver beyond just investment performance.¹

Notes on risk

All investing is subject to risk, including the possible loss of the money you invest. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income. Investments in bonds are subject to interest rate, credit, and inflation risk. In a diversified portfolio, gains from some investments may offset losses from others. However, diversification does not ensure a profit or protect against a loss. Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year (the target date) when an investor in the fund would retire and leave the work force. The fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. An investment in target-date funds is not guaranteed at any time, including on or after the target date.

IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model® regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from VCMM are derived from 10,000 simulations for each modeled asset class. Simulations as of December 31, 2020. Results from the model may vary with each use and over time. For more information, see Appendix 2 on page 24.

¹ See Blanchett and Kaplan (2013 and 2018), Finke (2013), Grable and Chatterjee (2014), Kinniry et al. (2019), Pagliaro and Utkus (2019), and Warschauer and Sciglimpaglia (2012).

In this paper, we expand on the previous literature by introducing a new model of advice value. We also introduce an expanded process for measuring the value of financial advice.

First, we present a four-part framework that encompasses financial planning, portfolio outcomes, emotional support, and time saved as sources of advice value. Financial advice can provide value in a multitude of ways, whether delivered by human advisors, digital platforms, employer plan designs, or investment products. Some examples of services include:

- Being a source of professional expertise, experience, and judgment for the investor
- Helping investors uncover their goals and setting up financial road maps for meeting those goals
- Managing portfolios to maximize returns while controlling risk and minimizing taxes
- Preparing investors to deal with the possibility of unpredictable outcomes that may have low probability but catastrophic effects (early death, for example, or life events that change income, savings, or retirement dates in ways that might lower the chance of maintaining a desired lifestyle)
- Keeping on top of an investor's changing life and needs, and making sure that plans stay on course

- Saving investors time by performing otherwise time-consuming tasks on their behalf
- Offering emotional support and guidance to help investors stay motivated and provide peace of mind.

Next, we present a methodology for evaluating and surfacing high-value advice interventions in the context of an individual investor's financial plan. Vanguard recently introduced the Vanguard Financial Advice Model (VFAM), which allows us to quantify the value of a specific investor's financial plan relative to the current strategy. This model takes into account taxes, advice fees, uncertain market and inflation scenarios, and variable life expectancy outcomes. It then uses a utility framework to determine how much additional return or current balance it would take for a client's baseline strategy to provide an equivalent range of outcomes to an approach that includes a particular set of advice interventions.

Finally, we illustrate the personalized nature of advice value by presenting four hypothetical case studies. These illustrate how the value of advice varies substantially among individuals and the importance of tailoring financial advice to specific investment needs.

A model of advice value

Vanguard has previously proposed a three-part framework for understanding the types of value that advisors can provide to investors (Pagliaro and Utkus, 2019):

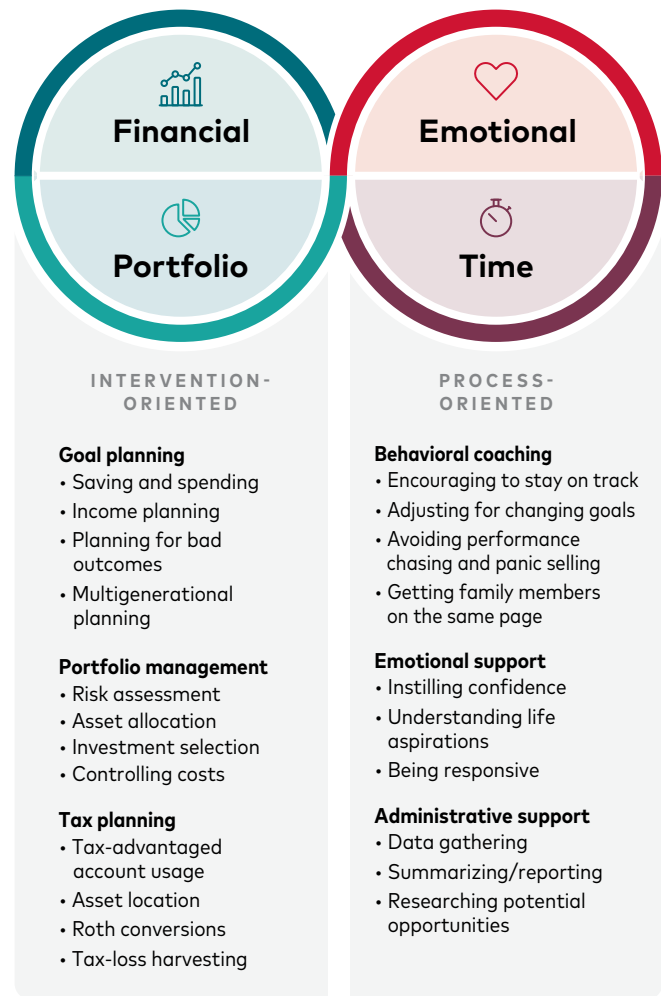
- **Financial value.** Ultimately, investment returns are important only in helping investors achieve specific financial objectives. Advisors can engage in a myriad of financial planning strategies to help ensure that investors are prepared to meet the financial challenges that they and their families may face.
- **Portfolio value.** This comes from building a well-diversified portfolio that generates better after-tax risk-adjusted returns net of all fees, suitably matched to the client's risk tolerance.
- **Emotional value.** This comes from helping investors achieve financial well-being or peace of mind.

For this discussion, we add a fourth type of value to this model:

- **Time value.** This comes from the simple fact that advice providers perform tasks that individual investors might otherwise not have the time, willingness, or ability to perform on their own.

Financial value and portfolio value are most often delivered by the specific interventions that advice providers recommend for each investor. Emotional and time value are most often delivered by the process by which the advice provider produces, explains, and implements those interventions and ensures their follow-through. **Figure 1** shows how specific types of advice interventions and activities map to our larger value framework.

FIGURE 1.
Sources of advice value



Source: Vanguard.

Advice as an ongoing process

The key for advice providers who want to maximize their value to their clients is to consider each client carefully and match them to the advice interventions that are likely to provide the most value in the most efficient manner. For every client, advisors should consider each of the advice opportunities shown in Figure 1. How can advice provide value to this client in each category? Which specific strategies are likely to be the most valuable for each person, given their personal circumstances, objectives, and life stage? In many ways, an advisor's most valuable task is choosing which advice interventions to bring to each investor for implementing.

The process of advice adds ongoing value when advisors engage in activities such as:

- Following up to make sure that clients are saving as much as they intended to
- Helping clients realize that their plan gives them the flexibility to spend and enjoy life
- Reassuring clients in times of economic euphoria or turmoil so that they stay on track
- Representing their clients' financial interests in conversations with other professionals such as insurance agents, tax preparers, or estate planning attorneys

- Making sure that clients take advantage of tax-deferred vehicles early in the year so they can avoid the "procrastination penalty"²
- Recognizing and executing on opportunities for tax-loss harvesting or asset location
- Encouraging clients to stay invested and avoid large cash holdings
- Recognizing opportunities to take advantage of low-income years with Roth conversions or other strategies.

It is the advisor's task to proactively monitor clients and their portfolios to know when changes are needed. By effectively engaging investors and providing expertise through activities like these, the advisor earns the client's trust—one of the primary drivers of a successful long-term advisory relationship (Madamba and Utkus, 2017). Indeed, the number one attribute driving emotional value is "to know my financial plan is continuously monitored and updated" (Madamba, Pagliaro, and Utkus, 2020).

² See Weber and Bruno (2014) for a discussion of the procrastination penalty, which refers to the fact that the longer you wait to invest, the less time you have to reap the benefits of compounding.

The importance of personalization

The process of giving financial advice starts with discovery: gaining an understanding of each client's aspirations for their lives and financial future. Engaging with an advice provider is more than a financial decision; it is also an emotional commitment. Investors who do not feel that their advice provider understands their needs are unlikely to be confident in that advisor's ability to deliver the results they desire. The better an advisor understands each investor's goals and circumstances, the more confident that investor will be in the integrity of the advice given. Understanding the investor's aspirations and crafting a tailored and personal financial plan is key for delivering value. In fact, we believe that the more personal an advice plan is, the more value it can deliver, at least before fees are considered.

Products, digital advice services, and human advisors can all provide advice value through personalization. Target-date funds offer a form of personalized investing plan based on age. Moving forward, innovations like direct indexing point to a future that includes products that can be closely tied to a particular investor's preferences and circumstances. Digital services can provide engaging experiences to help investors uncover and define their goals and objectives, and they can offer types of ongoing portfolio monitoring and adjustment that would not have been possible in the past. Human advisors remain the standard for listening and for uncovering needs that clients may have trouble expressing, offering emotional support when needed, and persuading investors to pursue courses of action that are in their best interest.³

³ See Costa and Henshaw (2022) for a discussion of how advised investors perceive the relative strengths and weaknesses of digital versus human advisors.

Staying the course

Putting an initial plan together is only the first step of an advisory relationship. Clients will reach their goals only if the plan is followed. Most investors are aware of the importance of maintaining a disciplined approach to investing but may find it difficult to follow through. For example, many investors intend to save a certain amount, but life may get in the way. As a result, advisors can add significant value by acting as a behavioral coach. It's up to the advisor to encourage people or automate a process to keep them on track and to offer words of encouragement when they succeed in doing so. In the same way a physical trainer can keep people committed to an exercise program that improves their physical health, an advisor can provide the coaching and encouragement to help people stay committed to improving their financial wellness.

Extreme market conditions can sometimes offer opportunities for high-value behavioral coaching. When faced with poor market performance, some investors may be tempted to reduce their equity allocation or even leave the market altogether. On the other hand, when the market is doing well, investors may get overly enthusiastic about equity performance, taking on more risk than they should. By circumventing clients' tendencies to chase returns or run for cover in emotionally

charged markets, advisors may prevent significant wealth destruction and add meaningful value along the way. Indeed, recent Vanguard research has shown how abandoning an investment strategy can be costly. During the recent bout of pandemic-driven market volatility, a small proportion of Vanguard U.S. investors panicked, abandoned equities entirely, and moved to an all-cash portfolio. Vanguard research found that most of these investors would have been better off had they remained invested throughout the market turmoil (De Luca and Young, 2020).

Industry studies further suggest that investors commonly receive lower returns than the funds they invest in. Morningstar's annual "Mind the Gap" study has consistently found a difference between the average investor's return and the average fund's total return, with the investor typically doing worse than their funds (Morningstar, 2021). This so-called behavior gap or investor-return gap is due to the timing of investors' cash flows. Although many reasons may drive the gap in returns, larger differences are generally taken as a sign of performance chasing. This provides further evidence that there is a role for advisors to act as a behavioral coach, helping clients to "stay the course" with their well-planned investment strategies.

A model for measuring the value of advice interventions

How do we go about quantifying the value of advice? Certainly it can be hard to put a monetary figure on the emotional and time value components of advice, given their subjective nature. As a result, our framework concentrates on how we can best quantify the financial and portfolio value of advice provided to a specific investor. Past attempts to quantify this value have mostly focused on looking at pieces of the advice framework we detailed earlier to determine how much value a specific advice task might produce.

Such an approach, however, offers little insight into how the value of a specific set of advice interventions varies from person to person and situation to situation. As a result, we propose measuring the value of advice based on a three-step process laid out in **Figure 2**.

Step 1. First we establish a baseline model:

- What will an investor do absent the advice interventions that we want to measure?
- What is the range of potential outcomes an investor will face if they follow that baseline strategy?

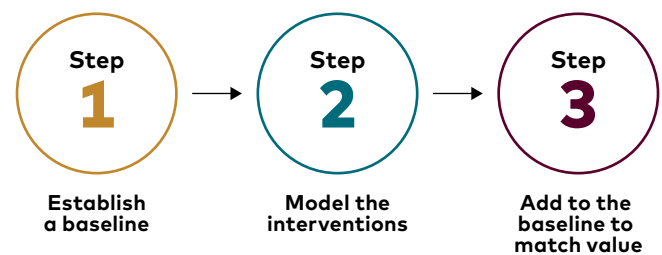
Step 2. Once we have established a baseline, we can change the modeled outcomes by adding the advice interventions we want to value.

- How does the range of potential outcomes improve when we undertake the suggested interventions?⁴

Step 3. Now we can return to the original baseline model and determine how much additional wealth or extra annual return the investor would need to achieve a distribution of outcomes, using their current approach, that is equivalent to the advised alternative.

This paper primarily shows results expressed as a return amount, in basis points, as that is the most frequent measure used in other value-of-advice literature. (A basis point is one-hundredth of a percentage point.) It is also the way advisor fees are generally assessed. We will also show “windfall equivalent dollars”—the amount that would need to be added to a taxable account today—as an alternative measure.

FIGURE 2.
To measure value, compare the advised alternative to a baseline



Source: Vanguard.

⁴ It is possible that a particular set of advice interventions may result in a worse range of outcomes for a specific investor, especially net of costs.

Using VFAM to measure advice value

To facilitate the process of assessing the value of advice, Vanguard has developed VFAM. **Figure 3** shows the key elements of this model.

Let's look at each of these elements in more depth:

Cash flow simulation model

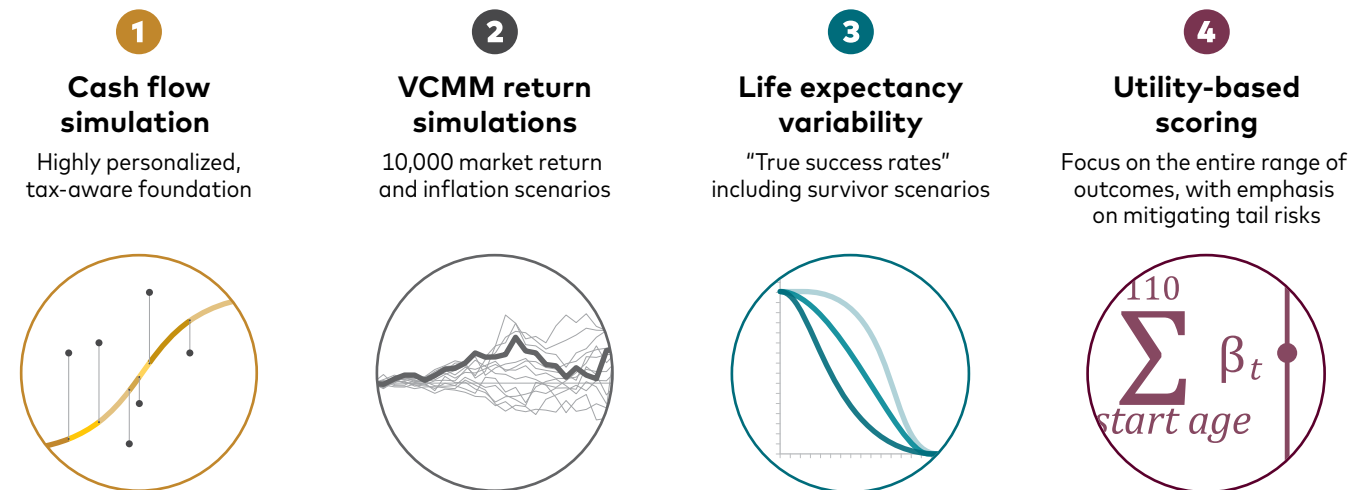
The advice valuation process we've outlined depends on a cash flow projection model to simulate potential outcomes. Key elements of the VFAM simulation include features such as:

- Detailed modeling of the U.S. income tax code, including granular tax-lot accounting, marginal tax brackets, and income-based surcharges

and fees such as the income-related monthly adjustment amount (IRMAA) of Medicare premium surcharges

- Flexible modeling of a wide variety of asset allocation, glide path, and asset location strategies; rebalancing preferences; active strategies (assuming an alpha tendency and tracking error); and fee structures
- Ability to model different client behavior patterns (for example, "This client will move to an all-cash portfolio if they experience a 20% market loss.")
- Embedded calculations for Social Security claiming and for death benefits.

FIGURE 3.
Elements of the Vanguard Financial Advice Model



Source: Vanguard.

These features are important because a good assessment of value requires understanding both a client's baseline (unadvised) situation and the advised alternative. This means the simulations can't always assume advisor-aided "good behavior." For example, many cash flow models automatically assume regular rebalancing, but some investors wouldn't maintain consistent risk exposure without advisor intervention, so we need embedded behavior models to account for these behavior patterns.

These cash flow features allow us to surface and evaluate a host of potential advice interventions, including (but not limited to):

- Increasing or decreasing annual savings amounts
- Directing savings to different account types
- Asset allocation and rebalancing strategies
- Asset location strategies
- Purchasing various amounts of term life insurance
- Social Security claiming strategies
- Roth conversion strategies
- Withdrawal order strategies
- Increasing or decreasing retirement spending targets
- Behavioral discipline versus performance-chasing and market-timing behaviors.

VCMM return simulations

It is important to understand how cash flow simulations will vary across different financial market and inflation environments. To determine those, the Vanguard Financial Advice Model uses 10,000 asset class returns and inflation paths generated by the Vanguard Capital Markets Model® (VCMM). By projecting across different market scenarios, VFAM can evaluate a wide range of possible financial outcomes for a client's current portfolio approach and its advised alternative, taking into account how the distribution of outcomes changes in different market environments.

Life expectancy variability

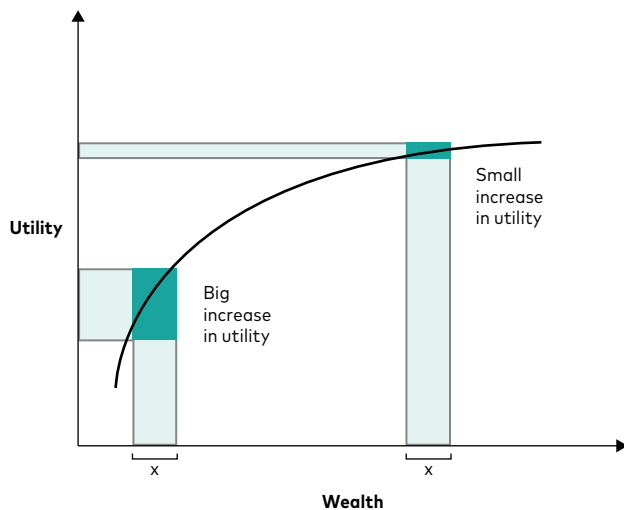
Another source of future uncertainty in projecting outcomes is life expectancy. Most industry models project across a fixed life expectancy assumption. VFAM instead uses the investor's age and health status to calculate the possibility of death in each year and weigh those outcomes accordingly. In the case of a couple, each simulation path includes a random death age for the first spouse to die, so that contingencies involving such matters as survivor benefits, life insurance benefits, and spending changes can be accurately assessed.

This means that each of the 10,000 market return scenarios is further weighted based on the probability that the client will live to experience the given outcome.

Utility-based scoring

VFAM uses a utility framework to score the lifetime spending and bequest distributions of the baseline and advised scenarios. Utility is not strictly a measure of wealth, but rather of the life satisfaction that the wealth can provide. More wealth and more consumption are better, but additional dollars are not equally important to improving investor outcomes. **Figure 4** illustrates this effect. At lower wealth levels, an increase of a certain amount of wealth will have much greater utility than the same increase at higher wealth levels. VFAM thus determines the value of an advice intervention by adding an investment return or additional wealth component to the baseline scenario until that scenario has equivalent utility to the advised scenario.

FIGURE 4.
Marginal utility decreases as wealth increases



Note: The label "x" represents an increase of a given amount of wealth.

Source: Vanguard.

Implications of using VFAM's utility function as the measure of plan success include:

- **More emphasis on mitigating "left tail" outcomes.** Falling short on goals detracts more from satisfaction than excess wealth beyond meeting your goals provides, and our function accounts for this difference. Moreover, it can provide appropriate weight to low-probability catastrophic outcomes that may result from events such as early death, disability, or job loss. Advice recommendations that mitigate those scenarios will carry more weight than ones that fail in bad times but result in greater excess wealth in good times.
- **Preference for increased spending over increased bequest.** By default, we weigh consumption as 83% of the utility score and bequest as 17%, based on Lockwood (2014), but we can adjust this ratio depending on investor preferences. This reflects that, for most investors, the primary purpose of saving is to support consumption and lifestyle goals. Of course, if they successfully accumulate the wealth needed to ensure those objectives, they will generally leave behind a bequest as well, and a bigger bequest is better than a small one. Additional lifetime spending, however, is generally considered to be of higher utility than a larger bequest.
- **Adjustment for personal risk preferences.** The convexity of the utility curve varies based on each investor's preferences. The curve for more risk-averse investors will have more convexity, so the differences in utility at different wealth and spending levels will be more pronounced than for investors with more risk tolerance.

Benefits of this measurement approach

Many of the features we've described are, or have been, used in other approaches to advice provision and advice value measurement. For example, Morningstar's Gamma valuation approach also uses a utility-based equivalency measure to value possible sources of advice value (Blanchett and Kaplan, 2013). But we think our approach improves on traditional metrics in three primary ways:

- 1. Personalization.** Most prior discussions of value have focused on trying to value specific advice interventions in a general way. Our approach concentrates on assessing value at the individual investor level, and it explicitly accounts for differences in client marginal taxes, Medicare premium surcharges, and other attributes. Not only does this let us measure the value of interventions on a person-to-person basis, but it also can be useful in helping us discover and prioritize the specific interventions that are most valuable for each investor.
- 2. Multistrategy effects.** Each potential advice intervention can provide value in isolation, but by measuring a set of interventions together, we can see how the total value is not simply the sum of its parts. Sometimes multiple interventions can overlap and independently fix issues with a particular baseline case. At other times, advice interactions can work together to produce superior outcomes than when applied without each other. For example,

an asset location strategy that emphasizes putting bonds in tax-advantaged accounts will have little value if the savings plan doesn't use those account types; conversely, that savings strategy using tax-advantaged accounts may become even more valuable when asset location is used.

- 3. Distributional outcomes.** Although many advice discussions use Monte Carlo simulations to illustrate the range of potential investment outcomes, our method explicitly values each of those possible outcomes and weighs them appropriately. Our method also explicitly accounts for variability of life expectancy outcomes, while most advice conventions simply project to a given age.

Case studies

Using the framework we just described, we can measure the value of advice at the client level. The advice activities that are most valuable will vary greatly from person to person depending on one's individual characteristics, one's life stage, and market conditions. To show the flexibility of our measurement approach, we chose four case studies of hypothetical clients at different life stages and with different levels of financial sophistication. **Figure 5** on page 13 provides a quick glance at the value they get from advice, and a more detailed look at each case study is provided in subsequent pages.

FIGURE 5.
A summary of our case study results



Chris and Jamie

This millennial couple primarily invest through a target-date fund that is part of Chris's 401(k) plan; they also have taxable savings—also in a target-date fund—that was a gift from Jamie's parents.

Advice value equivalent to approximately

83 basis points of additional annual return or **\$131,000** of additional cash windfall

Most valuable advice interventions:

- Increasing annual savings
- Personalizing the asset allocation and glide path for their needs
- Making use of Roth account options
- Buying life insurance



Pete and Kim

Pete, 59, wants to retire next year when his wife, Kim, turns 65. They have just under \$1.2 million in various investment accounts but worry that it might not be enough if Pete retires early.

Advice value equivalent to approximately

218 basis points of additional annual return or **\$644,000** of additional cash windfall

Most valuable advice interventions:

- Deferring Social Security
- Getting rid of cash drag and home bias
- Reducing annual spending targets



Maria and Larry

This retired couple, both 70, have built a nest egg of about \$3.2 million through aggressive saving and frugal living. Current projections show almost no chance they will run out of money.

Advice value equivalent to approximately

266 basis points of additional annual return or **\$1,666,000** of additional cash windfall

Most valuable advice interventions:

- Increasing annual spending
- Reducing investment costs
- Using tax-smart investment strategies



Tristan

Tristan is a high-income earner on his first job. He has vague financial goals and gets most of his investing ideas from friends, family, and social media.

Advice value equivalent to approximately

285 basis points of additional annual return or **\$489,000** of additional cash windfall

Most valuable advice interventions:

- Saving more, using tax-advantaged accounts
- Getting rid of cash drag and home bias
- Avoiding market-timing and performance-chasing behaviors
- Diversifying stock investments instead of having concentrated individual security positions

Source: Vanguard.



Case study: Chris and Jamie

Key attributes	Chris's age	26
	Jamie's age	27
	Tax status	Married, joint
	Chris's retirement age	65
	Jamie's retirement age	66
	Chris's annual salary	\$44,000
	Jamie's annual salary	\$30,000
	Annual living expenses	\$65,000
	Risk tolerance	Moderate
Joint investments	Taxable balance (target-date fund)	\$100,000
	Annual taxable savings	\$0
Chris's investments	Tax-deferred balance	\$42,000
	Annual tax-deferred savings	5%; 3% match
	Roth balance	\$0
	Annual Roth savings	\$0
Jamie's investments	Tax-deferred balance	\$0
	Annual tax-deferred savings	0%
	Roth balance	\$0
	Annual Roth savings	\$0
Estimated Social Security	Chris's estimated FRA* benefit	\$24,000
	Jamie's estimated FRA benefit	\$15,000

* Full retirement age.

Chris, 26, was automatically enrolled in her 401(k) plan when she was hired four years ago. She is contributing 5% of her salary and receives a 3% employer matching contribution. Chris and her wife, Jamie, also have about \$100,000 in taxable investments, most of which was a wedding gift from Jamie's parents. Jamie works as an independent contractor and has no retirement plan.

Up to this point, both Chris's retirement account and the taxable account have been invested in a target-date fund for simplicity. Although neither Chris nor Jamie has much interest in choosing investments, they know that investing is

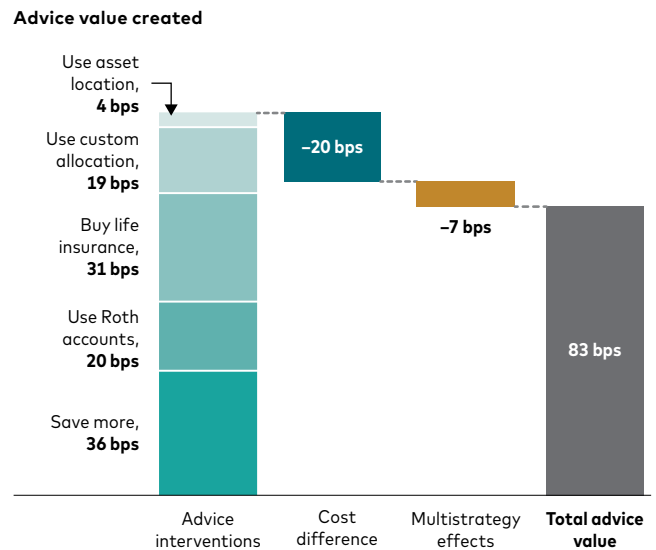
important. Chris signed up for a digital advice service to help her and Jamie understand how they are doing. This service will cost them 20 basis points more per year in fees.

Advice interventions

We present a set of advice interventions for Chris and Jamie that would have the same utility as if they kept their original plan but earned an extra 83 basis points of return annually. It's the same as if they kept the existing plan but got an extra \$131,000 added to their taxable account.

Figure 6 shows some advice interventions that could provide value for Chris and Jamie. They were already using a target-date fund, which is a well-diversified, age-appropriate allocation. Although a more personalized investment strategy allows us to add a few basis points of value, it's not a major part of the value that Chris and Jamie would get from advice in this instance.

FIGURE 6.
Chris and Jamie can get 83 basis points of annual advice value



Source: Vanguard.

The first thing Chris and Jamie learn is that if they remain on their current path, they could be headed for trouble in retirement. And as their income grows, they will likely end up spending more than they think they need in the years before retirement. So it makes sense for them to save a little more during their preretirement life to reduce the risk of retirement catastrophe and increase their future financial flexibility. Even a 10% increase (amounting to less than 1% of Chris's salary) produces value equivalent to an extra 36 basis points of investment return per year.

They can also get some value out of making more use of tax-free Roth account options, as they are young and can expect to see their income grow over time. Having more investments in different account types also allows them to get a bit of value from asset location—putting different kinds of investments in different account types to save in taxes over their lifetime.

Chris and Jamie can also get some value by purchasing some life insurance. In this case, we assume that each can buy a \$1 million level-premium term policy for about \$1,000 per year until retirement. Having that insurance also helps

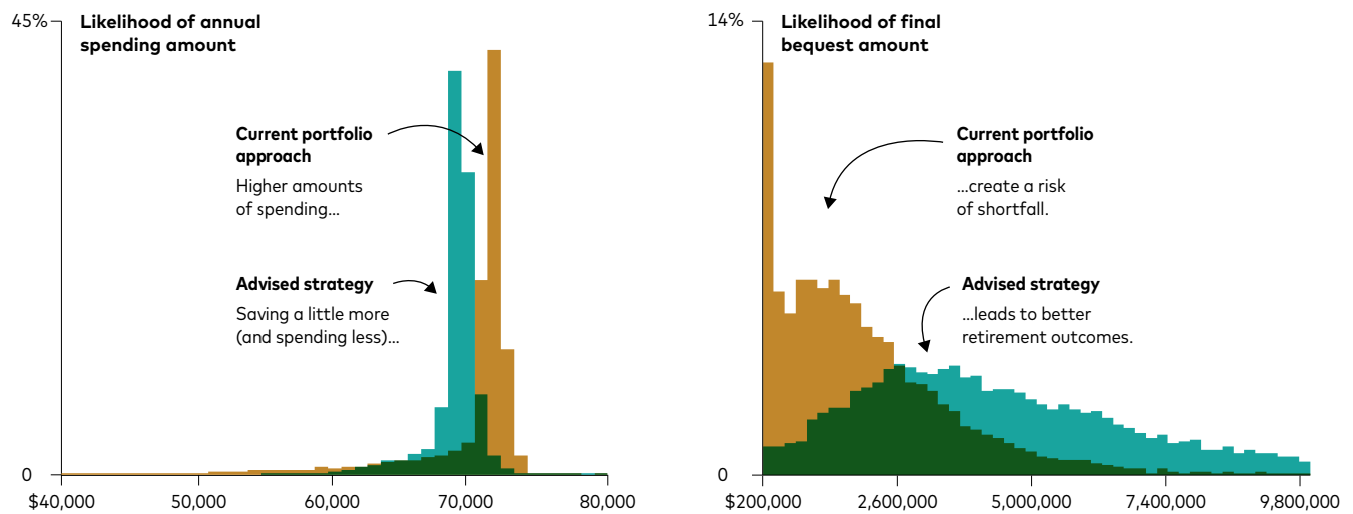
mitigate the loss of income that would occur should either Chris or Jamie die before their planned retirement ages.

Combining strategies

The multistrategy effects in this case largely center on the relationship between saving more and using Roth options as part of their savings strategy. Contributing to a Roth account carries a small amount of "save more" embedded in the action, because the saving is in after-tax dollars instead of pretax ones.

Figure 7 shows how implementing all these strategies together improves the range of possible outcomes for Chris and Jamie. While they sacrifice a bit of consumption in the short term by saving more, engaging in this strategy reduces the likelihood of "left-tail" spending outcomes, which are associated with running out of discretionary spending money. At the same time, this shifts the value of a potential bequest markedly to the right, which also translates to more life options in good market scenarios for Chris and Jamie as they build wealth and their goals evolve.

FIGURE 7.
A combination of approaches maximizes future financial flexibility



Source: Vanguard.



Case study: Pete and Kim

Key attributes	Pete's age	59
	Kim's age	64
	Tax status	Married, joint
	Pete's retirement age	60
	Kim's retirement age	Retired
	Pete's annual salary	\$110,000
	Annual living expenses	\$80,000
	Risk tolerance	Moderate
	Current stock allocation	60% (0% international)
	Current bond allocation:	25%
Current cash allocation	15%	
Joint investments	Taxable balance	\$400,000
Pete's investments	Tax-deferred balance	\$420,000
	Roth balance	\$50,000
Kim's investments	Tax-deferred balance	\$320,000
	Roth balance	\$0
Estimated Social Security	Pete's estimated FRA benefit	\$36,000
	Kim's current annual benefit	\$6,880

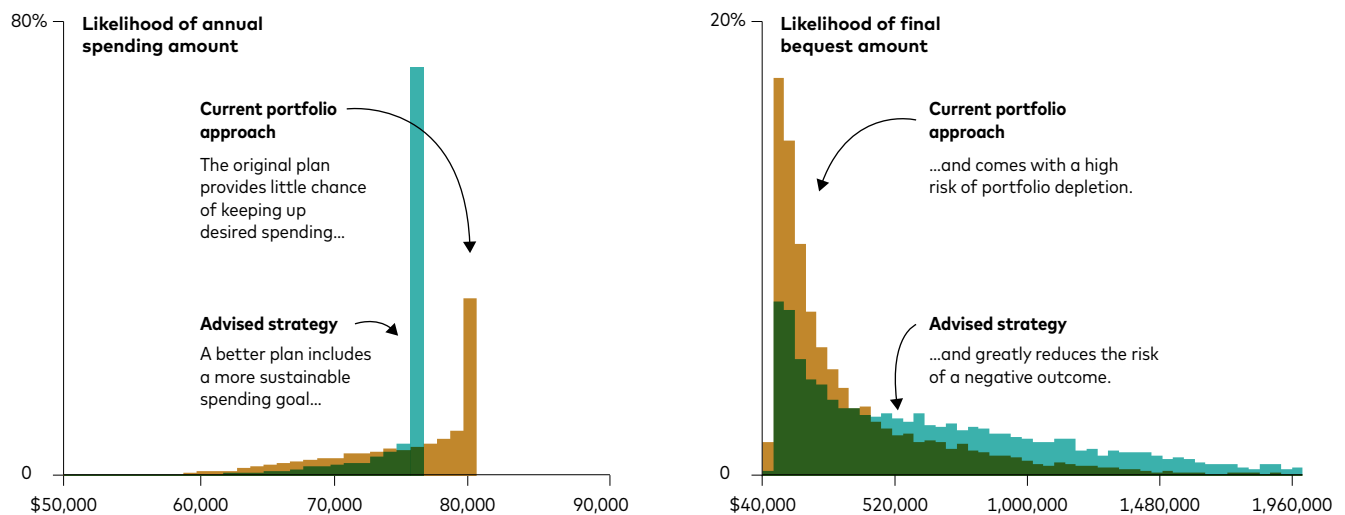
Pete is 59 and looking to retire next year, at which point Kim will also become eligible for Medicare. They want to enjoy life while they are still young. Pete, however, is worried that they may not have saved quite enough to make it work, but he feels that he has enough to bridge the two years until he can begin collecting his own Social Security benefits at age 62.

Pete has always enjoyed managing his own investments, but the stakes here seem particularly high, so they decide to engage an advisor to help them make sure they are properly positioned for the transition and the loss of his income.

Advice interventions

Figure 8 shows that Pete and Kim can't just expect to be successful without implementing some advice interventions. Their baseline range of outcomes includes a troublingly high chance of failure. Fortunately, their advisor can find some interventions that greatly reduce their risk of a shortfall and can make their dream practical, especially if they are ready to make further future changes if the situation requires.

FIGURE 8.
Advice can help make early retirement a reality



Source: Vanguard.

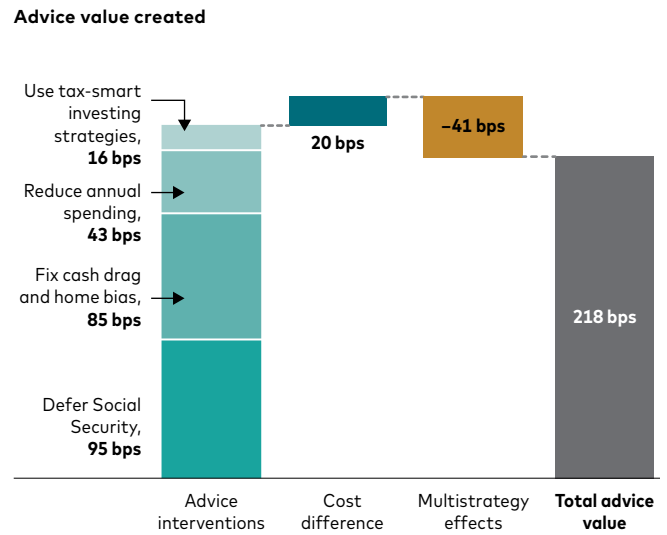
In fact, as **Figure 9** shows, the selected interventions for Pete and Kim would have the same utility as if they kept their original plan and earned an extra 218 basis points of return annually. That is also equivalent in utility to an immediate \$644,000 infusion added to their taxable account.

Pete and Kim get value from a number of sources. The first recommendation that would add value is to defer claiming Pete’s Social Security until he turns 70. While originally skeptical of this approach, Pete and Kim eventually see that deferring Pete’s much larger benefit protects the survivor should one of them die. It also means they have more guaranteed income in case they find their assets falling short in the future.

Pete and Kim’s advisor is also able to find some big opportunities for providing portfolio value. Pete and Kim are keeping quite a bit of money in cash, which will be more productive if invested. They also have a strong U.S. home bias that limits their risk-adjusted returns (Donaldson et al., 2021). In addition, their advisor knows that costs matter. Simply reducing mutual fund expense ratios is enough to cover the advisory fees in this case, with 20 basis points to spare. Pete and Kim also have some minor tax-reduction opportunities they can realize, particularly by using smart withdrawal strategies and Roth conversions in the years before Social Security and required minimum distributions (RMDs) begin.

The other key intervention is to scale back their spending a bit. A 10% budget reduction gives them a little more room to weather the possibility of future bad outcomes. Perhaps they will have the opportunity to reconsider this intervention if markets are friendly in the coming years, but for now they will happily take a more conservative approach to spending if it helps them realize their retirement dreams.

FIGURE 9.
Pete and Kim can get 218 basis points of annual advice value



Source: Vanguard.

Combining strategies

The multistrategy effects in this case largely center on many of these interventions being independently sufficient to mitigate some of the smaller shortfall scenarios. So combining them adds less marginal utility than it would appear if the independent values were added together.



Case study: Maria and Larry

Key attributes	Maria's age	70
	Larry's age	70
	Tax status	Married, joint
	Annual living expenses	\$100,000
	Risk tolerance	Moderate-aggressive
Joint investments	Taxable balance	\$600,000
Maria's investments	Tax-deferred balance	\$2 million
	Roth balance	\$500,000
Larry's investments	Tax-deferred balance	\$0
	Roth balance	\$0
Estimated Social Security	Maria's annual benefit	\$39,000
	Larry's annual benefit	\$15,000

Maria and her husband, Larry, are both 70. Until she met Larry, Maria was used to doing things her own way, and she accumulated over \$3 million through frugal living and aggressive saving. Maria has always worried about running out of money in retirement. She waited to collect Social Security until age 70, and Larry is collecting a smaller spousal benefit based on Maria's FRA amount.

Maria hasn't been happy lately with her current advisor, and she feels she can probably do at least as well with a new advisor while paying 45 basis points less per year doing it. She'd like to make sure that the nest egg she worked so hard to build doesn't crack.

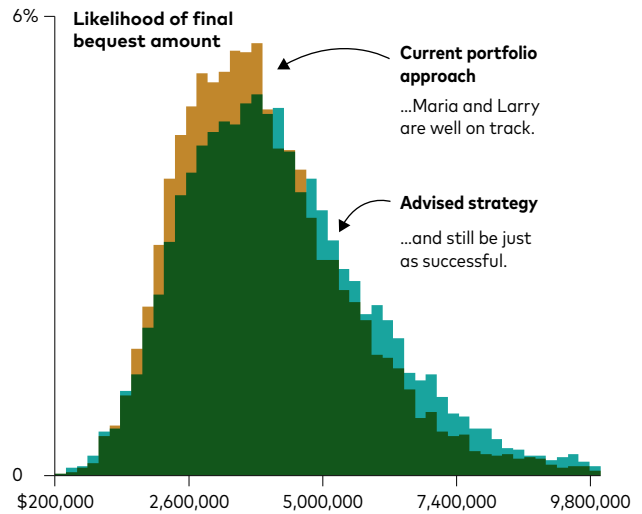
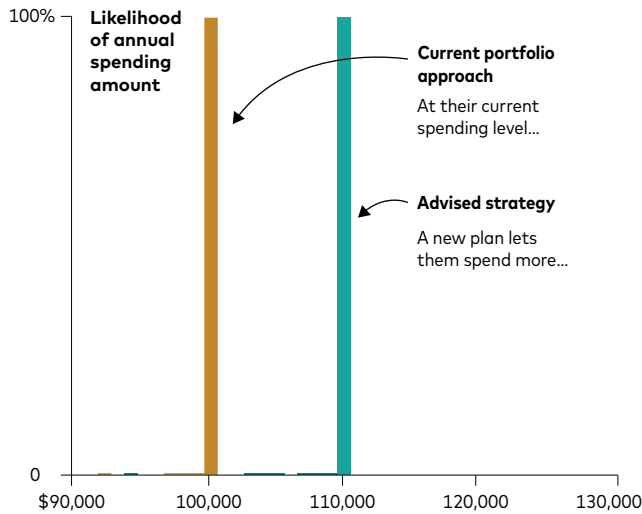
Advice interventions

At first glance, Maria and Larry's advisor can see they are in pretty good shape. With their current plan, there is no realistic chance they will run out of money, so what advice interventions will add value? Interestingly in this case, the most valuable one is to encourage them to worry less and spend more. Even with a 10% increase in annual spending, they will still have virtually no risk of running out of money. Maria is reluctant to do this, because she is comfortable with her life and finds it difficult to spend from the nest egg she has worked so hard to build. But her advisor is able to help her realize that she would enjoy renting a large vacation home in the summer and inviting her children and grandchildren to come along. Sometimes good behavioral coaching isn't about preventing bad investment behaviors but rather about giving investors permission to indulge.

In fact, as **Figure 10** on page 19 shows, they can spend this additional money while still increasing their financial security. That is because the reduction in costs, combined with some targeted asset allocation and tax strategies, is more than enough to counter any negative portfolio effects of the added spending. In this case, the multistrategy effects are positive. By themselves, investment and cost changes would just build low-utility wealth. Spending changes alone would increase consumption, but at the cost of some wealth. Putting them together improves both.

FIGURE 10.

A combination of advice interventions improves both wealth and spending outcomes



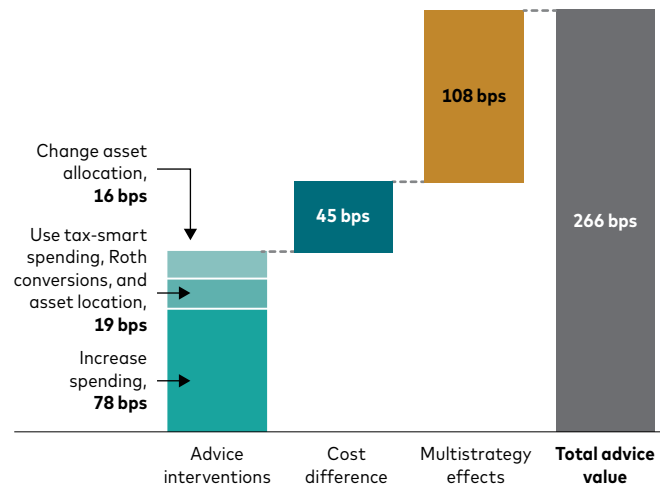
Source: Vanguard.

Figure 11 shows the value of this strategy for Maria and Larry. The new strategy provides an expected value equivalent to 266 basis points of additional return in the old strategy (which would have just built unused wealth and still not resulted in a vacation home). In dollar terms, this translates to a windfall equivalent of over \$1.6 million! It takes a large amount of extra bequest to provide the same degree of life satisfaction as those family vacations will.

FIGURE 11.

Maria and Larry can get 266 basis points of annual advice value

Advice value created



Source: Vanguard.



Case study: Tristan

Key attributes		
Tristan's age		25
Tax status		Single
Retirement age		65
Current annual salary		\$120,000
Asset mix		80% individual stocks, 20% cash
Taxable investments		\$80,000
Tax-advantaged accounts		\$0

Tristan is a young high-income professional who began his investing life by purchasing stocks that he found interesting or that family and friends recommended. He did well with these for a while but recently saw the value of his portfolio drop by over 50% in just a few weeks, so he decided it might be worth a 100-basis-point fee to enlist the help of an advisor.

Advice interventions

Tristan's advisor focuses on getting Tristan into a formal, disciplined savings and investment plan. She starts by making sure Tristan moves away from a strategy of haphazard saving in taxable accounts. She achieves this by formalizing and automating the savings, while increasing the amount from \$10,000 to \$11,000 per year and taking advantage of IRA contributions as part of that plan.

Then she moves on to the portfolio, getting Tristan's cash off the sidelines and moving him from his haphazard mix of individual securities into a globally diversified asset allocation using diversified mutual funds and ETFs (even realizing some tax losses in the process).

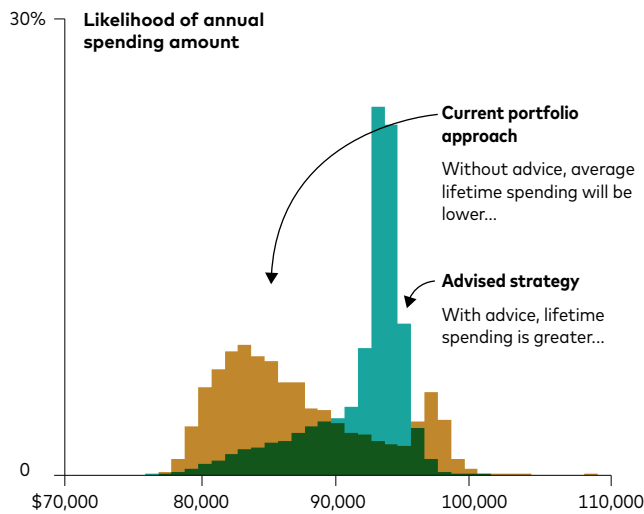
Finally, Tristan's advisor knows she will need to be attentive to Tristan going forward, as without behavioral reinforcement he is likely to drift from his plan and react to market swings.⁵ With advice, he can avoid those potential pitfalls.

Figure 12 on page 21 shows that this combination of interventions can help steer Tristan from a path with few prospects of success onto one with much more stable and optimistic prospects. It's important in a case like Tristan's not to put too much emphasis on matters such as bequest outcomes. After all, he's 25 and hopefully a long way from worrying about bequests. Those amounts, however, represent cases of accumulating sufficient wealth so that he will have options in the future as his goals and aspirations change. Tristan's advisor will have opportunities to continue to add value in helping Tristan accomplish those changing goals.

⁵ For the baseline case, we assume that Tristan will increase his target equity allocation by 10 percentage points when equity returns exceed 20% annually and that he will move to an all-cash position when equity returns drop by 10%. After moving to cash, he will reinvest at the baseline asset mix after the market increases by 20%.

FIGURE 12.

Getting advice can put Tristan on track for financial success



Source: Vanguard.

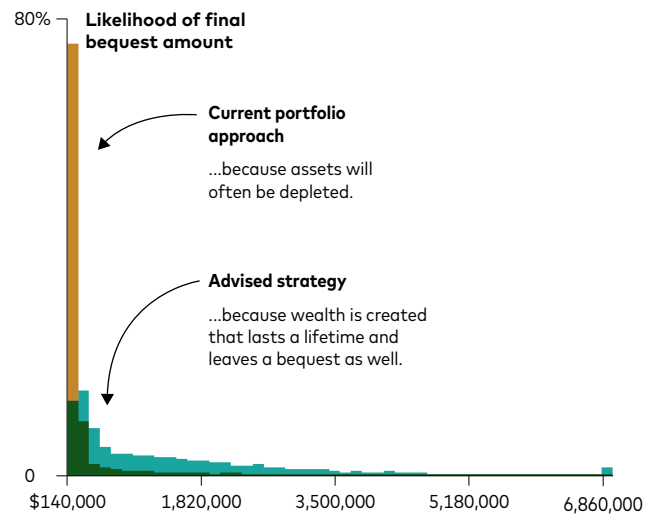
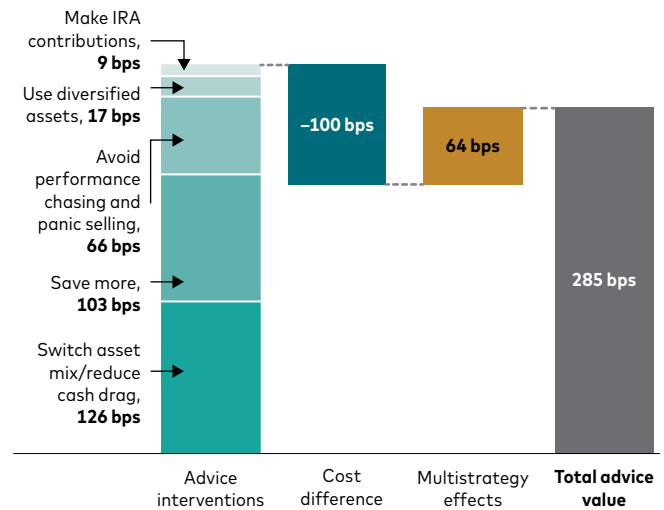


Figure 13 shows that the interventions suggested by Tristan’s advisor, if implemented faithfully, provide an expected value equivalent to an additional return of 285 basis points annually, even taking into account the advisor’s 100-basis-point annual fee. In dollar terms, this equates to a substantial windfall of about \$489,000.

FIGURE 13.

Tristan can get 285 basis points of annual advice value

Advice value created



Source: Vanguard.

Conclusion

Advisors provide a great deal of value in a myriad of ways; the value of helping investors reach their goals is higher than many people imagine. By making that value tangible to clients, advisors can improve investor outcomes and attract and retain client relationships.

The key to providing and understanding value in any situation is to first understand the goals and plans of each client. Identifying the right set of advice interventions for each client and situation is critical to maximizing advisor value. Measuring this value is a key task to help advisors discover the most valuable advice recommendations and to communicate to clients the value of following through. As life progresses and aspirations and market conditions change, advice providers need to depend on their process so they can understand investors' changing needs and continue to find opportunities to provide value.

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Appendix 1. A review of our underlying assumptions in the Vanguard Financial Advice Model

The Vanguard Financial Advice Model (VFAM) is designed to exhaustively simulate combinations of financial planning strategies over a life cycle of potential market and economic forecasts to assess how each strategy would perform. All consumption and bequest amounts are presented and evaluated in inflation-adjusted dollars.

Asset allocation recommendations are valued using the Vanguard Life-Cycle Investing Model (VLCM). The VLCM is a proprietary model for glide-path construction that can assist in the creation of custom investment portfolios for retirement and nonretirement goals.

For these case studies, we took the recommended allocation based on the VLCM's framework and used it in the VFAM baseline to determine the value of the other advice interventions. The calculated asset allocation advice value from the VLCM was added to the advice value for the other interventions from the VFAM to produce the total value depicted in the case studies.

All case studies in this paper assume no state taxes are owed. 2021 marginal tax and capital gains rates and breakpoints, as well as Medicare surcharge amounts and breakpoints, are assumed to continue into the future, adjusted for inflation. Capital gains are assumed to be realized in order from the highest basis lots to the lowest basis. Potential bequests are tax-adjusted by assuming a full step-up of taxable basis at death and an immediate tax of tax-deferred balance at a 24% beneficiary tax rate.

Salary is assumed to grow at a rate of inflation plus 1% annually. For the Tristan and the Chris and Jamie case studies, we assume that any excess income not explicitly saved before retirement will be spent in the year it is earned and that Social Security will be taken at Full Retirement Age. After retirement for all cases, any income in excess of the spending goal is assumed to be invested in a taxable account. The model will cap portfolio withdrawals in any year at 20% of the remaining wealth. In addition, an emergency reserve savings in the amount of six months of expenses is assumed to be kept in cash.

Life expectancy variability is calculated using Society of Actuaries (SOA) mortality tables. More specifically, we use RPH-2014 mortality tables: employee table for ages 18 to 64, annuitant table for ages 65+. The mortality tables are headcount-weighted and projected forward using the mortality improvement scale MP-2017. All case studies in this paper assume average health status.

Appendix 2. The Vanguard Capital Markets Model

IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. VCMM results will vary with each use and over time.

The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More important, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model® is a proprietary financial simulation tool developed and maintained by Vanguard's primary investment research and advice teams. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include U.S. and international equity markets, several maturities of the U.S. Treasury and corporate fixed income markets, international fixed income markets, U.S. money markets, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis

based on available monthly financial and economic data from as early as 1960. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. Results produced by the tool will vary with each use and over time.

Indexes for VCMM simulations

The long-term returns of our hypothetical portfolios are based on data for the appropriate market indexes through December 31, 2020. We chose these benchmarks to provide the most complete history possible, and we apportioned the global allocations to align with Vanguard's guidance in constructing diversified portfolios. Asset classes and their representative forecast indexes are as follows:

- **U.S. equities:** MSCI US Broad Market Index.
- **Global ex-U.S. equities:** MSCI All Country World ex USA Index.
- **U.S. cash:** U.S. 3-Month Treasury—constant maturity.
- **U.S. bonds:** Bloomberg U.S. Aggregate Bond Index.
- **Global ex-U.S. bonds:** Bloomberg Global Aggregate ex-USD Index.

Appendix 3. The Vanguard Life-Cycle Investing Model

The Vanguard Life-Cycle Investing Model (VLCM) is a proprietary model for glide-path construction that can assist in the creation of custom investment portfolios for retirement as well as nonretirement goals, such as saving for college. The main principle behind life-cycle investing and VLCM is to maximize the expected utility of consumption and wealth for people's financial goals. The VLCM selects optimal glide paths for given risk tolerances, goals, and demographic characteristics by assessing the trade-offs, across someone's life and/or time horizon, between taking investment risk to increase

potential wealth and spending and the downside of increased uncertainty and volatility associated with more investment risk. Thousands of glide paths are compared, and the glide path with the highest utility score (the one that strikes the optimal balance between expected outcome and risk) is the best solution for the investor's preferences, circumstances, and goal.

The VLCM utilizes the distributional forecasting framework of the Vanguard Capital Markets Model (VCMM) and uses asset return simulations to calculate consumption and wealth outcomes for any glide path across 10,000 future possible scenarios.

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