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Quantifying the investor's view on the value of human and robo-advice

In this paper, we quantify how much investors value financial advice and where they believe advisers add value. Using a survey of more than 1,500 US investors who reported having a human adviser, a digital service, or both, we found the following:

- **Advice adds value across the board.** Regardless of the method of delivery, investors believe advice provides higher incremental portfolio value than going it alone. The perceived value-add to annual performance was 5% for human advice and 3% for digital-only advice.
- **The loyalty to human advisers is enduring.** While more than 90% of human-advised clients say they would not consider switching to digital, 88% of robo-advised clients would consider switching to a human adviser in the future.
- **Clients prefer emotional support from human advisers.** Investors using human advisers estimate being $160,000 closer to achieving their financial goals. Three times as many investors report having strong peace of mind when working with a human adviser as compared to going it alone.
- **Digital advice also serves a role.** Investors prefer digital advice for certain portfolio-management services such as diversification and tax optimisation.
- **The preference for advice delivery type is not dictated by client age or wealth.** Across the board, clients suggest that human advisers should consider automating their portfolio management services, leveraging technology to scale their business while strengthening their uniquely human value.

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Introduction

Frequent financial news headlines may lead people to believe that human advisers are under threat from technology. In the past decades, many fintech firms have entered the advice marketplace promising to disrupt human-advice practices. In the last two years, the impact of Covid-19 has further affected face-to-face models, and virtual interactions have gained traction in most business sectors. Given the increased use of technology, what are investors' preferences regarding advice, and how should advisers optimise their service delivery? In this paper, we study the trade-offs that investors perceive between human and digital (or robo-) delivery of advice in three steps.

First, we investigate whether technology is indeed a threat to financial advisers by examining loyalty to both digital and human advisers and the likelihood of switching services. The industry has primarily focused on how digital services could potentially replace human advisers. Less attention has been paid to the possibility that digital-advised clients could consider switching to human advisers. We study both possibilities in this paper.

Second, we measure the perceived value of digital and human advisers to investors. Many studies have measured the value of financial advice using various approaches[1]. Vanguard's paper *Quantifying Adviser's Alpha* (Kinniry et al., 2019) is a primary example of a normative approach. Our paper differs from previous work as it captures investors' perception of the value of financial advice delivered by human and digital services. The subjective nature of some components of value make perception an important and understudied metric to be accounted for in the broad discussion.

Third, we evaluate which services investors prefer to be delivered by human or digital advisers. Last, we explain how advisers can optimise their practices to maximise loyalty and support business growth.

Methodology

To investigate the trade-offs between human and digital advice delivery, we designed a two-part research study using both qualitative and quantitative methods. In April 2021, we conducted qualitative interviews with 25 investors and 15 advisers to understand how and why investors choose human versus digital advice services and the tasks that define each service model. We analysed the transcripts to arrive at 42 micro-interactions that define advice as a service through the lens of investors and advisers.

The quantitative phase was conducted in July 2021 and surveyed 1,518 investors who reported they had an advice service at the time of the survey. Our study was blind, conducted by a third party that did not reveal Vanguard as the sponsor. We included a representative sample of US investors by age, gender and other demographics with at least $100,000 in investable assets (see **Appendixes 1 and 2**). Respondents could indicate they used a human adviser, a robo-adviser, or both. Approximately 75% reported using a human adviser, with the remaining 25% using robo-advice or both types. Throughout this paper, we will use the terms robo-advice and digital advice interchangeably.

1 See Finke (2013), Grable and Chatterjee (2014), Murphy, Lamas, and Sin (2020), Pagliaro and Utkus (2019), Rossi and Utkus (2020a, 2020b), and Warschauer and Sciglimpaglia (2012).

Investor preferences and adviser loyalty

We first sought to answer the question of whether advisers should view robo-advice as a cannibalising threat to their existing client base. **Figure 1** presents survey responses on channel preferences and switching behaviours. For investors who already use a human adviser, 93% state that they would choose a service that includes a human adviser in the future. Despite the common headlines about technology replacing humans, our data suggest that investors have a strong loyalty to their human financial advisers.

Confirmation bias could be at work here, with respondents validating the choice they have already made. However, **Figure 2** presents evidence that this is likely not the primary explanation. When we ask current robo-advised clients about their future preference, we find that the same loyalty does not hold: 88% say they would be willing or extremely willing to work with a human adviser in the future.

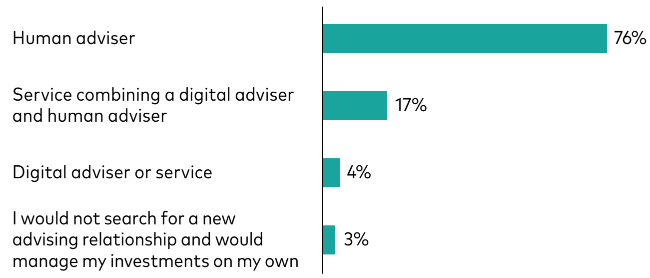
This contradiction provides important data for advisers as they think about prospecting and bringing in new business. Robo-advised clients could represent an untapped and under-targeted market to convert to human advisers, especially as their needs become more complex. We will explore this theme more later.

Because human-advised investors are not likely to switch to digital services, they must value interaction with their human advisers. In the next section, we explore the perceived value of advisers to both human- and digital-advised investors.

FIGURE 1.

Investors with human advisers are not likely to switch to a digital service

Question: If you had to leave your current [human] adviser today, what type of advising relationship would you search for in the future?



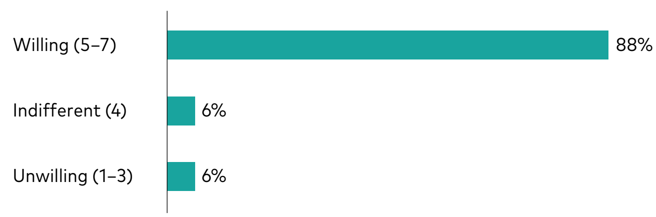
Note: The sample in this figure includes all clients who only have human advisers (1,175 in total).

Source: Vanguard, 2021.

FIGURE 2.

Investors with digital advisers are likely to switch to human advisers

Question: On a scale from 1 to 7 where 1 means "not at all willing" and 7 means "extremely willing," how willing are you to work with a human financial adviser in the future?



Note: The sample in this figure includes all clients who only have digital advisers (135 in total).

Source: Vanguard, 2021.

Advice value as defined by investors

While the case for loyalty to human advice is compelling, what drives this loyalty? We believe the answer lies in understanding the value of advice from the investors' point of view.

Vanguard has proposed that the value of advice goes beyond investment returns. Pagliaro and Utkus (2019) presented a framework based on portfolio financial and emotional outcomes. Portfolio value is the outcome of building a well-diversified portfolio tailored to an investor's preferences. Financial value revolves around planning to achieve desired financial goals. Emotional value embodies the idea of financial peace of mind. **Figure 3** shows the Pagliaro and Utkus value-of-advice framework.

FIGURE 3.

The value of advice can be broken down into portfolio financial and emotional value

Value-of-advice framework

Portfolio value

Optimal portfolio construction and client risk-taking

- Portfolio risk/return characteristics
- Tax efficiency
- Fees
- Rebalancing and trading activity

Financial value

Attainment of financial goals

- Saving and spending behaviour
- Debt levels
- Retirement planning: cash flow, income and health costs
- Insurance and risk management
- Legacy/bequest/estate planning

Emotional value

Financial peace of mind

- Trust in adviser and markets
- Success and sense of accomplishment
- Behavioural coaching
- Confidence

Source: Vanguard.

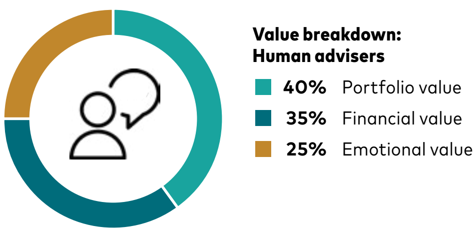
We added empirical data to this framework by asking investors to quantify their perceived value for each dimension. **Figure 4** shows the percentage of value investors ascribe to portfolio, financial and emotional values by advice delivery type. Investors believe that human-advised clients derive higher levels of emotional value from their financial advisers than digital-advised investors get from theirs. In seeking to convert robo-investors, advisers can leverage emotional value to help position their services.

In the next section, we further investigate investors' perception of each source of value, starting with portfolio, followed by financial, and ending with the emotional value of advice.

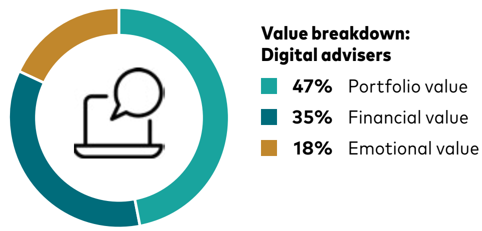
FIGURE 4.

Investors believe that human-advised clients derive more emotional value from advice than digital-advised clients get from theirs

Question: Within each of the boxes below, please allocate points based on the relative value you [would] receive from a **human** adviser.



Question: Now please allocate points based on the relative value you [would] receive from a **digital** adviser.



Notes: In the survey, portfolio, financial and emotional value are defined as follows: **Portfolio management** includes activities such as asset allocation, diversification, rebalancing, and performance; **financial planning** includes establishing goals, saving and spending strategies, debt management, retirement, and estate planning; and **emotional outcomes** includes trust and confidence in your adviser, peace of mind that you will achieve your goals, and assurance in times of market volatility. The sample includes all clients who answered the question (1,222).

Source: Vanguard, 2021.

Portfolio value

As Kinniry et al. (2019) point out, it is difficult to observe the value advisers add to a client's investment performance: "The difference in your clients' performance if they stayed invested according to your plan, as opposed to abandoning it, does not show up on any client statement."

In our survey, we extracted the perceived value of clients' performance by asking them what they believe their performance was with a financial adviser and what they believe it would have been without an adviser. By calculating the difference, we measure investors' perceived portfolio value of advice.

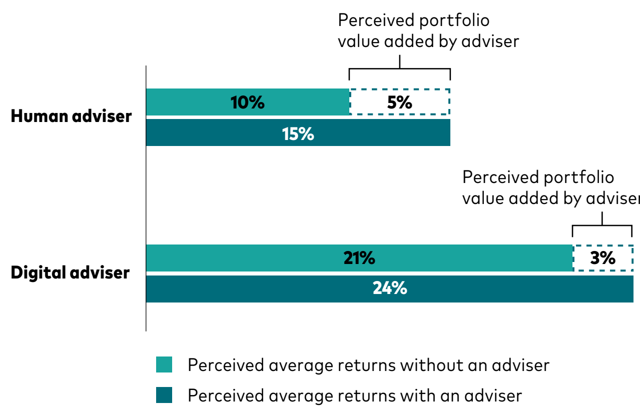
In **Figure 5**, we show the investors' perceived average return with an adviser, the perceived average without an adviser, and the calculated perceived portfolio value of both human and digital advisers.

FIGURE 5.

Investors believe human and digital advisers provide substantial portfolio value

Question 1: In your experience with your human [digital] adviser, what would you estimate your average annual investment returns to be in the past three years? If you have not had an adviser for three years, think about the relationship you have had with your adviser thus far.

Question 1a: You mentioned that your estimated average return while working with your human [digital] adviser was [insert answer to question 1]%. Imagine you did not have an adviser and were managing your investments on your own, what would you imagine your average annual investment returns to be in the same period?



Notes: In this figure, the sample includes all who responded to the question and had an answer of between –50% and 50% of average annual returns, to avoid outliers. In total, 802 human-advised and 187 digital-advised clients met these criteria. The portfolio value added is qualitatively similar across groups even in the presence of outliers.

Source: Vanguard, 2021.

Both human- and digital-advised clients perceive getting substantial portfolio value from their advisers. Human-advised clients believe that advisers add five percentage points to their performance on an annualised basis, and digital-advised clients believe that their advisers add three percentage points.

In terms of absolute performance, digital-advised investors believe they achieve higher returns than human-advised investors do. A possible explanation for this could be that the two samples of investors are different. For example, digital-advised investors skew younger and self-report being more aggressive in their investments, which would have led them to higher performance in recent years. Also, digital-advised investors believe that they could achieve a large portion of their performance on their own. It is important to note that these are perceived returns by the investors and not actual returns, which we could not verify in this study.

When analysing the perceived value of portfolio outcomes, we also find that investors using a human or digital advice service derive high perceived value (5% and 3%, respectively) from their advisers regardless of their self-reported risk tolerance[2].

Financial value

Financial value can best be defined as the ability to meet one's goals as articulated in a financial plan. Since the job of financial advisers is to articulate this plan, it is naturally hard to observe how clients would have fared without an adviser.

However, in a survey environment, we can estimate what clients perceive financial value to be in three steps. First, we ask their financial goal in dollar terms; second, we ask how far they are in percentage terms in their journey toward their goal; and third, we ask them to imagine how far they would be if they did not have a financial adviser. By subtracting the percentages in the second and third questions, we can provide an estimate of their perceived financial value of advice. By determining the investor's financial goal in dollar terms, we can also quantify this value.

2 When breaking down human- and digital-advised investors by their self-reported risk tolerance, the perceived portfolio value of advisers remains nearly identical: 6% (conservative, human-advised), 5% (moderate, human-advised), 5% (aggressive, human-advised), 3% (conservative, digital-advised), 3% (moderate, digital-advised), and 3% (aggressive, digital-advised).

Figure 6 shows how much of their goals investors believe they have achieved with an adviser, how far they believe they would be without an adviser, and the calculated perceived financial value of both human and digital advisers.

In percentage terms, human-advised clients have, on average, achieved 59% of their financial goals. However, they believe that if they did not have an adviser, they would have only achieved 43%. Therefore, these clients believe that advisers have contributed to 16% of their financial goals. For digital-advised clients, the estimate is 5%[3].

To convert perceived financial value to dollar terms, we used the median financial goal of both human-advised and digital-advised clients, which equalled $1,000,000. We find that human-advised clients attribute to their financial advisers being $160,000 closer to achieving their financial goals, and digital-advice clients attribute $50,000.

In other words, both human- and digital-advised clients believe that their advisers add substantial financial value in helping them achieve their financial goals.

FIGURE 6.

Investors believe both human and digital advisers provide high financial value

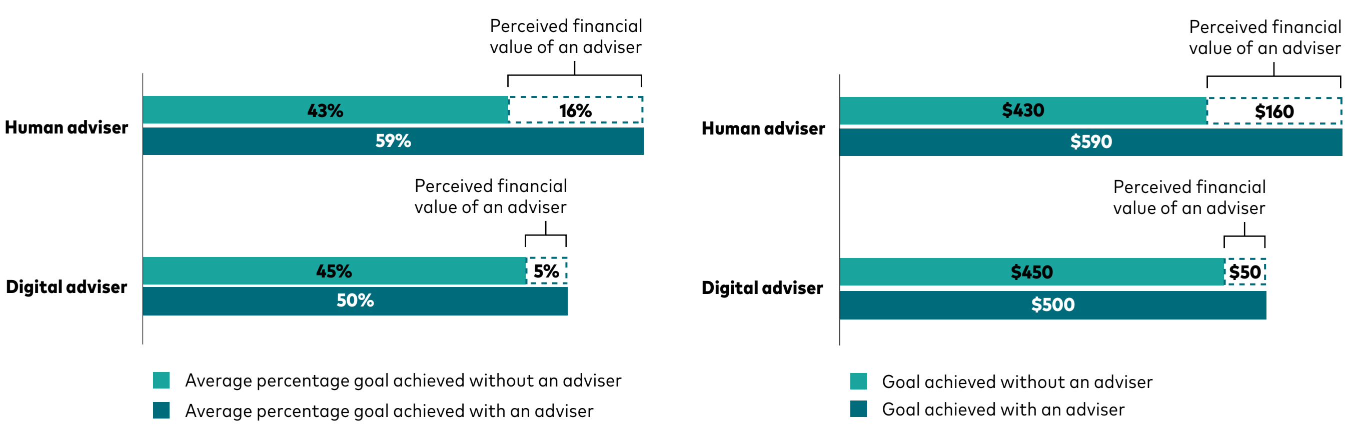
Question 2: What is your financial goal in terms of how much money you would like to have in your investment accounts?

Question 2a: You mentioned that your financial goal is to accumulate $[insert answer from question 2]. How much progress have you made toward that goal? Please enter a percentage where "0%" indicates that you have not achieved any of your goals and "100%" indicates you have achieved all of your goals.

Question 2b: As a reminder, you estimated your progress with a human [digital] adviser was [insert answer from question 2a]%. Now imagine you did not have a human [digital] adviser and were managing your investments on your own, how much progress do you think you would have made towards your goal of accumulating $[insert answer from question 2]? Please enter a percentage where "0%" indicates that you would not have achieved any of your goals and "100%" indicates you would have achieved all of your goals.

Panel A: Perceived financial value in percentage terms

Panel B: Perceived financial value in dollar terms (thousands)



Notes: In this figure, the sample includes all who responded to the question, for a total of 835 human-advised and 238 digital-advised clients. The median financial goal for both sets of clients is $1,000,000.

Source: Vanguard, 2021.

3 A financial plan is a long-term plan that advisers and investors agree upon. Because digital advice is a relatively recent development, it could be the case that the longer clients stay with an adviser, the longer they benefit from a financial plan. To test this idea, we broke down the perceived financial value of an adviser for human-advised clients, who comprised a large enough sample to reduce to smaller parts: 11% (tenure of 2 years or less), 12% (tenure of between 3 and 10 years), and 23% (tenure of 10 years or longer).

Emotional value

Finally, we come to the third tenet of the value framework: emotional value. This is certainly the hardest component to measure, as emotions are subjective by definition. For such subjective measures, perception can be reality for investors.

The financial choices households have to make have become more complex over time. By their nature, financial markets tend to be volatile, which may make investors anxious during market corrections. Following Pagliaro and Utkus (2019), we decided to measure financial peace of mind as a proxy for the emotional value of advice. While it is a recurring phrase in our industry that advice delivers peace of mind, we set out to quantify this elusive value. We did so in two steps.

First, we asked whether investors had peace of mind knowing that a human (or digital) adviser was looking after their investments. For clarity about the meaning of peace of mind, we explicitly stated, "Peace of mind refers to a positive feeling of knowing that your investments are on track." Afterward, we asked the investors whether they would have peace of mind if they were managing their own investments. **Figure 7** shows the answers.

Only 24% of human-advised clients would have peace of mind if they were managing their investments on their own. However, three times as many, or 80%, report having peace of mind with the help of their advisers. In absolute terms, human advisers increase investors' peace of mind by 56 percentage points.

On the other hand, the increase in peace of mind of digital-advised investors is only 12 percentage points. There are two reasons for this. First, most of these clients believe that they would have peace of mind even if they were investing their own money, thus giving them a higher starting baseline. Second, even after receiving financial advice, digital-advised clients report lower levels of peace of mind than human-advised clients do.

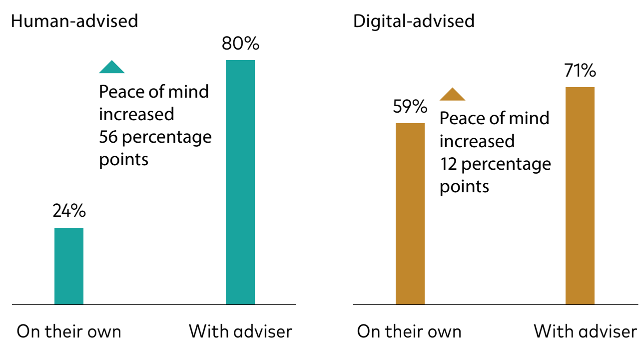
The vast majority of investors in our sample have peace of mind when investing. This is in large part because they believe that their advisers add emotional value.

FIGURE 7.

Human advisers dramatically increase their clients' peace of mind

Question: How much do you agree with the following statement? I have peace of mind knowing that a human [digital] adviser is looking after my investments. In this context, peace of mind refers to a positive feeling of knowing that your investments are on track.

Question: Now imagine you did not have a human [digital] adviser and were managing investments on your own, how much peace of mind would you have managing investments on your own?



Notes: In this figure, the sample includes all who responded to the question, for a total of 1,308 human-advised and 337 digital-advised clients. Clients could rate peace of mind from 0 ("No peace of mind at all") to 10 ("A great deal of peace of mind"). Clients were considered to have peace of mind if their rating was between 8 and 10.

Sources: Vanguard and Escalent, 2021.

Overall satisfaction with human and digital advice services

As seen in their perceived value of advice across portfolio, financial and emotional outcomes, investors believe advice adds value. However, does the advice satisfy their expectations? **Figure 8** shows investors' level of satisfaction based on type of advice delivery.

We find that 84% of human-advised investors report being satisfied with their advice, as compared to only 77% of digital-advised investors. This gap further reinforces the opportunity for switching from digital services to a human adviser and could explain why the preference for human advisers is stronger.

Given the difference in level of satisfaction and perceived value of advice, one may wonder why the needs of human-advised investors are seemingly better addressed. One plausible hypothesis is that digital-advised investors may have different levels of need for advice in the first place.

We investigated this hypothesis by asking investors whether they would have time, willingness and ability to manage their own investments without an advice service. **Figure 9** shows the results by type of advice delivery.

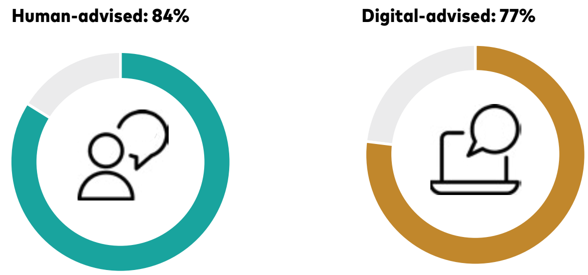
Figure 9 paints a clear picture; the majority of digital-advised investors report having time, willingness and ability to manage their own investments, whereas human-advised investors report having less of each of these characteristics. This discrepancy suggests that the two sets of clients may have different needs.

One potential reason for these differences is that digital-advised investors may have less complex financial needs. In fact, **Appendix 2** shows that these clients tend to be much younger and thus potentially have fewer financial goals. While we did not study this hypothesis, this idea could well reconcile the findings that digital-advised clients tend to perceive less value from advice and highly consider switching to a human adviser in the future, presumably once their financial situation becomes more complex.

FIGURE 8.

Human-advised investors have higher levels of satisfaction

Question: How satisfied are you with your human adviser [digital advice service] overall?



Notes: In this figure, the sample includes all who responded to the question, for a total of 1,377 human-advised and 337 digital-advised clients. They could rate satisfaction from 0 ("No satisfaction at all") to 10 ("Completely satisfied"). They were considered satisfied if their rating was between 8 and 10.

Sources: Vanguard and Escalent, 2021.

FIGURE 9.

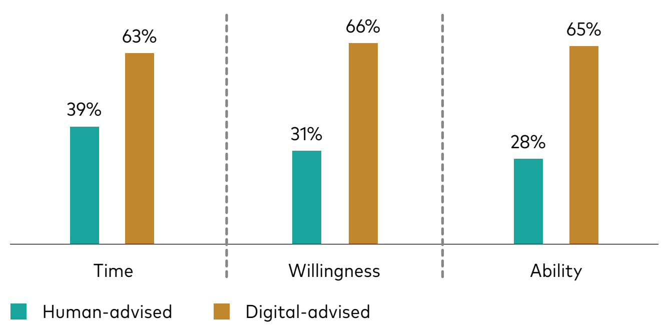
Digital-advised clients report higher levels of time, willingness and ability to manage their own investments

Question: Imagine you did not have a human [digital] adviser and were managing investments on your own, how much would you agree with each of the following statements?

I have **sufficient time** to personally manage my investments.

I'm **willing to manage** my investments.

I feel I have the **knowledge and ability** to properly manage my investments.



Notes: In this figure, the sample includes all respondents. In total, 1,352, 1,354, and 1,351 human-advised clients and 341, 338, and 340 digital-advised clients answered the time, willingness and ability questions, respectively. They could rate the statements from 0 ("Not at all agree") to 10 ("Completely agree"). They were considered to agree with the statement if their rating was between 8 and 10.

Source: Vanguard, 2021.

Investor preferences: Breaking down advice into the sum of the parts

In the first half of this paper, we quantified the perceived value that investors derive from advice and how that value differs based on the type of advice delivery. However, these results considered advice services in aggregate. In this section, we provide further detail by breaking down advice into discrete components and looking at them separately to investigate which services *within* advice investors prefer to be delivered by a human and which are best delivered by automation.

We interviewed investors and advisers to come up with a list of micro-interactions that constitute what financial advice is. We then asked investors to rate these micro-interactions based on their preferences regarding human or digital delivery. **Figure 10** displays the 10 micro-interactions for which all investors in the sample indicated the highest preference for human delivery. **Appendix 4** provides the full rating of all 42 micro-interactions.

There is a strong predilection for human delivery of many advice services; it is preferred over digital delivery by at least 40 percentage points. More important, if we go back to our value framework in Pagliaro and Utkus (2019), we find that most of these preferences align to the emotional and financial success components of the value-of-advice framework rather than the portfolio dimension.

FIGURE 10.

Investors prefer emotional and financial-planning services to be delivered by humans

Investors' stated preferences (top 10)

Notes: In this figure, all 1,518 clients answered the question. They were presented with the micro-interactions and asked to rate whether they preferred that service to be delivered by a human or a digital adviser. The ratings were presented on an 11-point scale, where 0 meant "Completely delivered by a human" and 10 meant "Completely delivered by a digital service." Clients were considered to prefer human delivery if their rating was between 0 and 4 and digital delivery of the service if their rating was between 6 and 10.

Sources: Vanguard and Escalent, 2021.

Next, we evaluate what services investors believe would be best delivered by digital advisers. **Figure 11** displays the 10 micro-interactions for which investors reported the highest preference.

We find that the services investors prefer to be delivered digitally are related to functional tasks and portfolio management, such as "manage taxes/capital gains efficiently" and "diversify investments". These results corroborate the findings of previous Vanguard research. Bennyhoff, Kinniry and DiJoseph (2018) stressed how work related to portfolio outcomes has been commoditised and how advisers should focus on services in which humans excel, such as behavioural coaching.

FIGURE 11.

Investors have the highest preference for digital services for portfolio outcomes and functional tasks

Investors' stated preferences (top 10)

Notes: In this figure, all 1,518 clients answered the question. They were presented with the micro-interactions and asked to rate whether they preferred that service to be delivered by a human or a digital adviser. The ratings were presented on an 11-point scale, where 0 meant "Completely delivered by a human" and 10 meant "Completely delivered by a digital service." Clients were considered to prefer human delivery if their rating was between 0 and 4 and digital delivery of the service if their rating was between 6 and 10.

Sources: Vanguard and Escalent, 2021

Optimising human and digital delivery for business growth

In the previous section, we asked investors their absolute preferences for human or digital delivery of specific advice services. Unsurprisingly, some investors prefer most services to be delivered by humans, whereas others prefer digital delivery. However, these investors do not prefer one or the other delivery equally for all services. In this section, we investigate investors' relative preferences for human or digital advice.

Knowing relative preferences for service delivery is important for two reasons. First, it helps advisers optimise their service and ensure they are pursuing the right clients based on their service model. Advisers must still be cognisant of their overall cost-to-serve model and recognise that all delivery channels may not be a fit for all clients as they look at segmenting their business. Second, since advisers' time is a scarce resource, it is beneficial for them to understand which services can be outsourced to automation to help scale their practices in a cost-efficient manner.

In this section of our survey, all investors—both human- and digital-advised—were presented with four micro-interactions at a time and asked which ones they prefer to have delivered by a human and which by a digital service. By repeating this task multiple times with different micro-interactions, we can calculate both the rank of preferences and their relative importance.

Figure 12 presents the ranking of micro-interactions from most preferred to least preferred to be delivered by a human adviser. We also include the relative-preference score for each micro-interaction. See the note below Figure 12 for how to interpret the scores. **Appendix 5** provides the full ranking and relative scores of all 42 micro-interactions.

Figure 12 confirms that clients prefer emotional and financial outcomes to be delivered by humans and portfolio and functional tasks digitally. What differentiates these findings from the previous section is that we can quantify by how much clients prefer emotional and financial outcomes to be delivered by humans.

Let's compare the relative scores of two services, such as micro-interaction #2, "Develop a connection/relationship with clients," an emotional task, and #41, "Diversify investments," a portfolio task. Their relative-preference scores are 218 and 32. This means that investors prefer 6.8 times (218 divided by 32) more that a human establish a connection than that a human diversify investments.

By looking at the ranking of micro-interactions and their relative scores, we confirm that investors prefer emotional and financial outcomes to be delivered by humans by large margins. Of course, this could change for different demographics. One of the most discussed new trends in advice is what type of delivery millennials would prefer.

FIGURE 12.

Human advisers should focus on delivering emotional and financial outcomes while automating portfolio construction and functional tasks

Preference	Rank	Micro-interaction	Relative preference (average index = 100)
Human	1	Know clients—feel that they and their retirement goals are understood	220
	2	Develop a connection/relationship with clients	218
	3	Work in clients' best interests—take good care of them	204
	4	Make clients feel listened to and understood	185
	5	Is empathetic to clients' personal situation and needs	181
	6	Make sure clients understand their financial plan and/or goals well	169
	7	Give clients trust in the advice they're given	158
	8	Coach clients to do, or not do, things across many financial areas of their lives (including while in retirement)	151
	9	Support clients through market downturns, volatility and life events	149
	10	Reach out to clients proactively	140
	33	Keep clients informed on market insights and what they mean for them	54
	34	Validate the right decisions are being made over time	53
	35	Access the clients' most appropriate funds (including while in retirement) as they are needed	51
	36	Manage taxes/capital gains effectively	49
	37	Motivate clients to budget to retire well without running out of money	47
	38	Gather accurate inputs for clients by helping them understand how to answer	43
	39	Account for scenarios of different market conditions or life events (what-if)	37
	40	Prevent details, or entire accounts, from being overlooked	32
Digital	41	Diversify investments	32
	42	Simplify for organised, cohesive management	23

Notes: In this figure, all 1,518 clients answered the question. They were presented with 4 micro-interactions at a time, 12 times in different screens, and asked which they most preferred to be delivered by a human or digital service so that we could rank each micro-interaction as well as relative preferences. The statistical technique used to calculate the rank and relative preference scores is called MaxDiff. The relative-preference score should be interpreted as follows. Take the micro-interactions ranked #8—"Coach clients to do, or not do, things across many financial areas of their lives (including while in retirement)," and #36—"Manage taxes/capital gains effectively," for example. Their relative-preference scores are 158 and 49. This means that investors prefer that micro-interaction #8 be delivered by a human 3.2 times (158 divided by 49) more than micro-interaction #36.

Sources: Vanguard and Escalent, 2021.

To address this question, we perform the same statistical technique as in Figure 12 to come up with ranks and relative scores for clients in different generations, with differing wealth levels and types of advice delivery. **Figure 13** shows the correlation matrix of ranks and relative scores for these demographic breakdowns. A high correlation means there is little difference in preferred delivery.

Surprisingly, we find both rank and relative-preference scores to be highly correlated, with all correlations above 0.90 and most at least 0.97.

This means that demographics are not an important factor when considering relative preference for delivery.

Contrary to popular belief, we do not find that millennials have distinct preferences that differ from other generations when it comes to automation of service *within* advice. Thus, advisers do not need to customise the delivery channel of their offerings based on perceived generational differences.

FIGURE 13.

Demographics do not change the relative preference between human and digital delivery

Panel A. Correlation of ranked preferences for human and digital delivery among demographic groups

			Generation			Wealth			Advice delivery	
		All	**Millennial**	**Gen X**	**Boomer**	**Mass affluent**	**High net worth**	**Ultra-high net worth**	**Human-advised**	**Digital-advised**
	All	**1.00**								
Generation	**Millennial**	0.97	**1.00**							
	Gen X	0.99	0.97	**1.00**						
	Boomer	0.99	0.95	0.99	**1.00**					
Wealth	**Mass affluent**	0.99	0.97	0.99	0.99	**1.00**				
	High net worth	0.99	0.96	0.99	0.99	0.99	**1.00**			
	Ultra-high net worth	0.97	0.95	0.96	0.97	0.97	0.97	**1.00**		
Advice delivery	**Human-advised**	0.99	0.96	0.99	0.99	0.99	0.99	0.97	**1.00**	
	Digital-advised	0.97	0.99	0.97	0.95	0.97	0.96	0.94	0.96	**1.00**

Panel B. Correlation of relative-preference score of human versus digital delivery among demographic groups

			Generation			Wealth			Advice delivery	
		All	**Millennial**	**Gen X**	**Boomer**	**Mass affluent**	**High net worth**	**Ultra-high net worth**	**Human-advised**	**Digital-advised**
	All	**1.00**								
Generation	**Millennial**	0.97	**1.00**							
	Gen X	0.99	0.97	**1.00**						
	Boomer	0.99	0.95	0.99	**1.00**					
Wealth	**Mass affluent**	0.99	0.97	0.99	0.99	**1.00**				
	High net worth	0.99	0.96	0.99	0.99	0.99	**1.00**			
	Ultra-high net worth	0.98	0.95	0.98	0.98	0.98	0.98	**1.00**		
Advice delivery	**Human-advised**	0.99	0.97	0.99	0.99	0.99	0.99	0.98	**1.00**	
	Digital-advised	0.98	0.99	0.98	0.96	0.98	0.97	0.95	0.97	**1.00**

Source: Vanguard, 2021.

Implications

Insights from our study have important implications for the financial advice industry. First, our findings represent good news for advice of all forms, because investors perceive substantial value across portfolio, financial and emotional outcomes.

Second, human-advised investors are substantially more likely to say they do not have the time, willingness or ability to manage their investments on their own. This finding supports framing an advice offer as a potential way for clients to free up time, leave behind an undesirable task and improve their portfolio, financial, and emotional outcomes.

Third, across all generations, wealth levels and advice-delivery types, clients suggest that human financial advisers should consider automation to outsource portfolio construction (for example, tax management, diversification and performance) and functional tasks (such as account setup and consistent monitoring). This is good news for advisers as it will allow them to scale technology to their entire client base. Investors also agree that human advisers excel in helping them achieve financial success and providing emotional piece of mind. By outsourcing portfolio construction and functional tasks, advisers can scale their business models and focus on delivering uniquely human skills.

Finally, we showed that advisers are not under threat from robo-services. Client loyalty to human advisers is durable, while investors choosing robo-services are open to selecting a human adviser in the future. Human advisers should leverage both automation and upskilling about emotional needs of clients to optimise their value, scale their practice and target the unmet needs of current robo-advised clients who would be willing to switch their business in the future.

Conclusion

We conducted a survey of 1,518 US investors to understand whether technology and digital advisers are a threat to human financial advisers. We found that digital services do not pose a threat to an adviser's existing book of business, as nine out of ten human-advised clients would not consider switching. However, we found the inverse for robo-advised clients, 88% of whom would consider switching to a human.

We then quantified the value that investors perceive in human and digital advice services across our three-pillar framework of portfolio, financial and emotional outcomes. We found that human agents excel in all dimensions by providing an additional perceived 5% in returns, $160,000 in financial success toward goals, and three times the emotional support as compared to investors managing their investments on their own.

Breaking down advice into discrete components, we found that investors prefer that parts of portfolio management and functional tasks be automated and that human advisers excel at delivering emotional outcomes. Overall, our results provide evidence that human advisers should leverage technology to scale their business while strengthening their uniquely human value proposition to address investors' emotional needs.

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Appendix

APPENDIX 1.
Demographics

		Number	Percentage
Sample size	Total	1518	100%
Advice delivery	Human-advised only	1175	77%
	Digital-advised only	135	9%
	Both human- and digital-advised	208	14%
	Human-advised	1383	91%
	Digital-advised	343	23%
Gender	Male	924	61%
	Female	593	39%
	Nonbinary/fluid	1	0%
	Another gender not listed	0	0%
Generation	Gen Z	7	0%
	Millennial	292	19%
	Gen X	424	28%
	Boomer	795	52%
Household income	Less than $50,000	23	2%
	$50,000–$74,999	229	15%
	$75,000–$99,999	288	19%
	$100,000–$149,999	550	36%
	$150,000–$249,999	321	21%
	$250,000–$299,999	45	3%
	$300,000 or more	62	4%
Investment segment	Mass affluent (less than $1M)	1106	73%
	High net worth (between $1M and $5M)	379	25%
	Ultra-high net worth (more than $5M)	33	2%
Self-reported risk tolerance	Very conservative/ conservative	449	30%
	Moderate	805	53%
	Aggressive/very aggressive	264	17%

Source: Vanguard, 2021.

APPENDIX 2.
Demographics by advice delivery

		Human-advised	Robo-advised
Gender	Male	60%	70%
	Female	40%	30%
	Nonbinary/fluid	0%	0%
	Another gender not listed	0%	0%
Generation	Gen Z	0%	1%
	Millennial	17%	46%
	Gen X	27%	43%
	Boomer	56%	10%
Household income	Less than $50,000	2%	0%
	$50,000–$74,999	16%	6%
	$75,000–$99,999	19%	13%
	$100,000–$149,999	35%	45%
	$150,000–$249,999	21%	27%
	$250,000–$299,999	3%	4%
	$300,000 or more	4%	5%
Investment segment	Mass affluent (less than $1M)	72%	85%
	High net worth (between $1M and $5M)	26%	13%
	Ultra-high net worth (more than $5M)	2%	2%
Self-reported risk tolerance	Very conservative/ conservative	30%	29%
	Moderate	54%	45%
	Aggressive/very aggressive	16%	26%
Measured risk tolerance	Very conservative/ conservative	9%	35%
	Moderate	59%	50%
	Aggressive/very aggressive	32%	15%

Source: Vanguard, 2021.

APPENDIX 3:

The 42 micro-interactions obtained from the qualitative study

1. Gather complete info from me through a personalised probing discussion
2. Gather accurate inputs from me by helping me understand how to answer
3. Make sure I understand my financial plan and/or goals well
4. Account for scenarios of different market conditions or life events (i.e., what-if)
5. Bring needs to my attention that I may not have been aware of
6. Give me peace of mind that I will be able to fund my goals
7. Is empathetic to my personal situation and needs
8. Achieve positive returns (i.e., make me money)
9. Align with me on the investment philosophy/approach
10. Encourage me to take the level of risk that is right for me
11. Personalise my portfolio to my unique situation and goals
12. Give me confidence in what is being done
13. Manage taxes/capital gains effectively
14. Give me trust in the advice
15. Prevent details, or entire accounts, from being overlooked
16. Understand the full, bigger picture across all my investments
17. Walk me through and/or assist with each step of the process
18. Simplify for organised, cohesive management
19. Make me feel relieved—less to worry about
20. Diversify investments
21. Help me take actions that will keep me on track to meet my goals
22. Reach out to me proactively
23. Know my investments are consistently paid attention to
24. Keep me informed on market insights and what they mean for me
25. Relate past experiences as context to compare and inform my investments
26. Develop a connection/relationship with me
27. Is readily available—there for me when I need it
28. Feel listened to and understood
29. Validate the right decisions are being made over time
30. Verify or adjust my thoughts/assumptions
31. Have the flexibility to make the adjustments I want or need
32. Work in my best interests—take good care of me
33. Anticipate my future needs
34. Apply judgement on future social, political, legal, or other external factors
35. Support me through market downturns, volatility, and life events
36. Make me comfortable making the switch into retirement
37. Ensure sufficient, consistent income streams in retirement
38. Motivate me to budget to retire well without running out of money
39. Access the most appropriate funds (including in retirement), as they are needed
40. Knows me—feel that I and my retirement goals are understood
41. Coordinate between family members or beneficiaries regarding estate planning
42. Coach me to do, or not do, things across many financial areas of my life (including in retirement)

Sources: Vanguard and Escalent, 2021.

APPENDIX 4:
The absolute preference for human and digital delivery of all 42 advice micro-interactions

Micro-interaction	Delivered by human	Delivered by digital
Develop a connection/relationship with me	76%	16%
Is empathetic to my personal situation and needs	75%	18%
Feel listened to and understood	73%	19%
Knows me—feel that I and my retirement goals are understood	73%	20%
Give me trust in the advice	68%	18%
Work in my best interests—take good care of me	64%	20%
Make sure I understand my financial plan and/or goals well	63%	22%
Give me confidence in what is being done	61%	21%
Encourage me to take the level of risk that is right for me	61%	20%
Make me comfortable making the switch into retirement	60%	20%
Support me through market downturns, volatility, and life events	60%	21%
Coach me to do, or not do, things across many financial areas of my life [including in retirement]	59%	24%
Walk me through and/or assist with each step of the process	59%	26%
Reach out to me proactively	58%	27%
Verify or adjust my thoughts/assumptions	57%	26%
Make me feel relieved—less to worry about	56%	24%
Personalise my portfolio to my unique situation and goals	56%	25%
Give me peace of mind that I will be able to fund my goals	56%	23%
Coordinate between family members or beneficiaries regarding estate planning	56%	25%
Understand the full, bigger picture across all my investments	55%	25%
Gather complete info from me through a personalised probing discussion	55%	27%
Validate the right decisions are being made over time	54%	23%
Align with me on the investment philosophy/approach	53%	23%
Anticipate my future needs	50%	28%
Bring needs to my attention that I may not have been aware of	48%	27%
Help me take actions that will keep me on track to meet my goals	45%	29%
Relate past experiences as context to compare and inform my investments	45%	31%
Gather accurate inputs from me by helping me understand how to answer	45%	35%
Is readily available—there for me when I need it	44%	32%
Know my investments are consistently paid attention to	44%	35%
Motivate me to budget to retire well without running out of money	43%	28%
Apply judgement on future social, political, legal, or other external factors	42%	33%
Have the flexibility to make the adjustments I want or need	41%	31%
Ensure sufficient, consistent income streams in retirement	40%	31%
Keep me informed on market insights and what they mean for me	39%	36%
Account for scenarios of different market conditions or life events [i.e., what-if]	39%	36%
Access the most appropriate funds [including in retirement], as they are needed	37%	38%
Diversify investments	35%	38%
Achieve positive returns [i.e., make me money]	35%	35%
Prevent details, or entire accounts, from being overlooked	34%	41%
Manage taxes/capital gains effectively	31%	40%
Simplify for organised, cohesive management	28%	42%

Notes: In this figure, all 1,518 clients answered the question. They were presented with the micro-interactions and asked to rate whether they preferred that service to be delivered by a human or a digital adviser. The ratings were presented on an 11-point scale, where 0 meant "Completely delivered by a human" and 10 meant "Completely delivered by a digital service." Clients were considered to prefer human delivery of the service if their rating was between 0 and 4 and digital delivery if their rating was between 6 and 10.

Sources: Vanguard and Escalent, 2021.

APPENDIX 5:

The relative preference for human and digital delivery of the 42 advice micro-interactions

Preference	Rank	Micro-interaction	Relative preference (average index = 100)
Human	1	Knows clients—feel that they and their retirement goals are understood	220
	2	Develop a connection/relationship with clients	218
	3	Work in clients' best interests—take good care of them	204
	4	Make clients feel listened to and understood	185
	5	Is empathetic to clients' personal situation and needs	181
	6	Make sure clients understand their financial plan and/or goals well	169
	7	Give clients trust in the advice they're given	158
	8	Coach clients to do, or not do, things across many financial areas of their lives (including while in retirement)	151
	9	Support clients through market downturns, volatility, and life events	149
	10	Reach out to clients proactively	140
	11	Personalise clients' portfolios to their unique situations and goals	137
	12	Encourage clients to take the level of risk that is right for them	125
	13	Walk clients through and/or assist with each step of the process	124
	14	Understand the full, bigger picture across all of a clients' investments	115
	15	Helping clients become comfortable making the switch into retirement	115
	16	Gather complete info for clients through a personalised probing discussion	108
	17	Make clients feel relieved—less to worry about	107
	18	Coordinate between family members or beneficiaries regarding estate planning	105
	19	Know clients' investments are consistently paid attention to	102
	20	Give clients confidence in what is being done	101
	21	Give clients peace of mind that they will be able to fund their goals	92
	22	Align with clients on the investment philosophy/approach	87
	23	Bring needs to clients' attention that they may not have been aware of	86
	24	Help clients take actions that will keep them on track to meet their goals	83
	25	Is readily available—there for clients when they need it	81
	26	Ensure sufficient, consistent income streams in retirement	68
	27	Achieve positive returns (i.e., make clients money)	68
	28	Apply judgement on future social, political, legal, or other external factors	67
	29	Verify or adjust clients' thoughts/assumptions	65
	30	Relate past experiences as context to compare and inform clients' investments	56
	31	Have the flexibility to make the adjustments clients want or need	56
	32	Anticipate clients' future needs	56
	33	Keep clients informed on market insights and what they mean for them	54
	34	Validate the right decisions are being made over time	53
	35	Access the clients' most appropriate funds (including while in retirement) as they are needed	51
	36	Manage taxes/capital gains effectively	49
	37	Motivate clients to budget to retire well without running out of money	47
	38	Gather accurate inputs for clients by helping them understand how to answer	43
	39	Account for scenarios of different market conditions or life events (i.e., what-if)	37
	40	Prevent details, or entire accounts, from being overlooked	32
	41	Diversify investments	32
Digital	42	Simplify for organised, cohesive management	23

Notes: In this figure, all 1,518 clients answered the question. They were presented with 4 micro-interactions at a time, 12 times in different screens, and asked what micro-interactions they most prefer to be delivered by a human or digital service. We then calculated the rank of each micro-interaction as well as their relative preferences using a statistical technique used called MaxDiff. The relative preference score should be interpreted as follows. Take the micro-interactions ranked #8 ("Coach clients to do, or not do, things across many financial areas of their lives (including while in retirement)") and #36 ("Manage taxes/capital gains effectively"), for example. Their relative preference scores are 158 and 49. This means that investors prefer micro-interaction #8 to be delivered by a human 3.2 times (158 divided by 49) more than micro-interaction #36.

Sources: Vanguard and Escalent, 2021.

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