
Robo-Advising

Andrew Alvarez, Huong “Katie” Truong, Jianing Zhu

(a.) What are the issues associated with traditional financial advisory services? What are the “pain points”?

Traditionally, financial advisory services require a significant initial investment and charge expensive fees to clients. Most traditional financial advisory services target older investors with over \$1 million in assets and charge an annual fee of 1 percent on assets under management (The Wealthfront Generation, p.3). Naturally, these constraints exclude millennials, who have yet to accumulate significant wealth. While baby boomers hold the majority of assets under management, millennials make up 28.7 percent of the U.S. population and baby boomers make up slightly less at 23.7 percent of the U.S. population (The Wealthfront Generation, p. 2). Consequently, traditional financial advisory services are neglecting an important segment of the population that will grow to hold more wealth in the future.

Many potential customers hold high levels of cash and lack engagement, financial literacy, and access to financial advice (Digital Investment Advice, p. 2-3). Currently, traditional advisory services fail to address these pain points. In the U.S., survey participants held 65 percent of their total savings and investments in cash (Digital Investment Advice, p. 2). Without financial literacy and professional advice, customers continue to hold their wealth in cash, perceiving that cash is safer than other investment vehicles. However, this behavior leads to an erosion of spending power over time in conditions of negative or low interest rates. In a survey, roughly 28 percent of individuals employed professional advising but nearly 25 percent stopped due to the high costs involved (Digital Investment Advice, p. 3). Evidently, this skepticism towards non-cash investments and cost barrier prevents individuals from seeking and benefiting from advice.

Moreover, initiating a relationship with a traditional financial advisory service firm can be inconvenient, requiring communication with a third-party to set up the advisory service. As a result, millennial investors tend to prefer digital over human advisors for everyday transactions due to ease of access and increased autonomy. Additionally, individual investors often lack adequate diversification, which financial advisory services can help with. However, individuals using traditional financial advisory services often do not comply with financial advice due to difficulty implementing the advice (The Promises and Pitfall of Robo-Advising, p. 2). Consequently, robo-advising can improve this pain point by automating implementation and reversing low rates of

compliance, especially for investors who lack the financial literacy to implement complex financial advice.

(b.) What is Wealthfront's core service and value proposition?

Wealthfront, a digital financial advisory service, democratizes access to investment management for taxable and retirement accounts based on the risk tolerance of each investor. Andy Rachleff and Dan Carroll, the co-founders of Wealthfront, intended to serve the “millennial generation” with an automated low-cost investment platform that provides core financial services such as asset diversification, passive investing, dividend-based rebalancing, daily tax-loss harvesting, and single stock diversification.

Wealthfront primarily focuses on passive index funds although the company considers 11 asset classes that includes equities, fixed income, and real assets (The Wealthfront Generation, p. 8). Using an algorithm, the digital financial advisory service rebalances an investment portfolio when it deviates significantly from the optimal portfolio rather than at pre-specified time intervals while considering tax implications to maximize returns. Additionally, the company offers an innovative daily tax-loss harvesting program for open taxable accounts that hold at least \$100,000 (The Wealthfront Generation, p. 10). Essentially, the company would sell ETFs that are declining in value to realize a loss that is tax deductible. Finally, the company provides a single stock diversification service that allows employees from select companies that recently went public to trade their stock over time at the volume weighted average price.

As its value proposition, Wealthfront addresses a young audience that has long been ignored by traditional financial advisory services. Geared towards millennials, the company operates a user-friendly platform with no physical retail locations (The Wealthfront Generation, p. 4). Furthermore, Wealthfront has a lower minimum investment requirement of \$5,000 and lower fees of 0.25 percent than traditional financial advisory services. Using the “freemium” business model, Wealthfront only charges a fee on assets in excess of \$25,000, making its services incredibly accessible (The Wealthfront Generation, p. 4). Wealthfront understands that millennials prioritize transparency in addition to price. As a result, the company does not charge hidden fees. Given these features, Wealthfront has been incredibly successful thus far in generating value from customers, leading to a client base of approximately 14,000 clients (The Wealthfront Generation, p. 7).

(c.) How does Wealthfront carry out portfolio construction? What are its value-added services?

Wealthfront's investment platform was built to maximize the long-term net-of-fee, after-tax, real investment return for each client's particular tolerance for risk (The Wealthfront Generation, p.8) using the mean-variance portfolio optimization (MVO) framework. The investment methodology employs five steps: Identify a diverse set of asset classes, select the most appropriate ETFs to represent each asset class, apply Modern Portfolio Theory to construct asset allocation, determine user's risk tolerance to select the most appropriate allocation, monitor and periodically rebalance the portfolio taking advantage of dividend reinvestment. For instance, if someone invests money into a Wealthfront account (there is a minimum deposit of 500 dollars), he would be given a questionnaire that has four objective and six subjective questions. Then Wealthfront determines the user's risk tolerance and sets asset allocation based on the survey. The allocation will maintain constant despite the change in money invested. Nevertheless, the portfolio will be adjusted automatically to meet the asset allocation if it crosses certain thresholds of variance from the optimum portfolio.

The other value-added services are Daily tax-loss harvesting and Single stock diversification. Daily tax-loss harvesting takes advantage of the investments that fall below their purchase price. Selling these investments generates a tax loss, thus it could be used to offset taxable returns and lower the payout of taxes for investors. Moreover, investment sold in this manner can be replaced with a highly correlated alternative, which keeps the risk and return of the portfolio unchanged.

For those people who work at public technology companies, they might want to diversify concentrated holdings in their company stock. Single stock diversification addresses the concern of high risk in managing a large concentration of a single stock (especially volatile tech stock). By asking users how much stock they would like to sell up-front and how quickly to sell the remainder, this service sets schedules for stock selling that fits the user's expected level of risk.

(d.) Overall, do you believe that Wealthfront can address the problems associated with existing financial advisory services? What factors enable them to do so? What factors are missing?

The existing problems with financial advisory services are high fees and high account minimum. Since Wealthfront's target customers are millennials, it sets the account minimum to be 500 dollars, which lowers the barrier to invest. Instead of charging for 1% of assets under management for financial advice, Wealthfront initially managed a client's first 25,000 dollars for

free and charged 0.25% of assets when total investments are above 25,000 dollars. It also offers an additional 5,000 managed for free for every referred new client.

Moreover, Wealthfront utilizes exchange-traded funds (ETF) to construct portfolios and has low expense ratios ranging from 0.06%-0.13%. Wealthfront's daily tax-loss harvesting basis also reduces the tax burden of investors compared to the manual end-of-year approach taken by traditional financial advisors.

Some drawbacks of Wealthfront is the lack of large-balance discounts and human advisors. Lack of human-involved financial planning and live chat support could decrease the flexibility and accountability of portfolio construction as Robo-advisors generate portfolio allocation based solely on algorithms. Wealthfront could integrate human services to provide a more diverse user experience. Besides, as Wealthfront does not offer discounts for wealthy individuals, it might be difficult to attract investors from the high-income group. Moreover, Wealthfront does not buy fractional shares of ETFs, and this prevents the users from investing their entire deposit.

(e.) Do you think a bionic model, currently experimented by financial advisor incumbents, that integrated both automated and human services can be the solution?

A bionic model initially seems like it would be difficult to market to consumers. Drawbacks of the bionic model include the behavioral biases of the human service part of the bionic model. One of the main points of robo-advising is to try to eliminate behavioral biases from being transferred from human advising to consumers. The hybrid model reintroduces the behavioral bias from a human advisor. In some cases companies may charge a higher fee for these hybridized systems, raising the barriers to entry into the market. Additionally, the human advisor is inherently more costly due to the compensation the human advisor takes on as part of his/her pay.

On the other hand, a hybridized model may help to eliminate the effects of adverse incentives that may come with human advising, including trying to get customers to buy assets that pay the highest commissions instead of maximizing returns. A human advisor can help investors understand their investments better and lead them to make smarter investing decisions. Human advisors are able to dig a little bit deeper than the questionnaires provided by robots to assess an investor's risk-tolerance and changing needs (The Rise of the Robo-advisor, p. 6).

Ultimately, there is a level of trust that humans seem to have for robots versus other humans when it comes to managing money. Although it is true that robots will use algorithms to tell an investor how to pick the mean-variance optimization solution, a robot will not paint the whole

picture. For example, a robot will not tell a customer how to develop saving habits that will enable them to, say, meet their retirement goals. For this reason, humans can be helpful in addition to robo-advising to paint a more realistic overall picture of how to invest and save money properly.

(f.) What are the strategic moves that Wealthfront should take?

Wealthfront should continue to target millennials and offer incentives to them to refer other millennials to the service. For example, Wealthfront should continue to offer the \$5,000 of additional funds managed per customer referral. It could offer additional terms at higher tiers. As an example, Wealthfront could offer 6 months of waived fees in addition to the \$5,000 asset managed for every 5 referred customers. Incentivizing growth in this way will allow Wealthfront to outpace growth of incumbent financial management services provided by Merrel Lynch and Scwhab. Surveyed millennials stated they were 95% confident in friends as a source of information. Therefore, a great deal can be gained by Wealthfront incentivizing a socialized experience.

Additionally, Wealthfront would do well to not change their mission to bring the “freemium” (The Wealthfront Generation, p. 4) business model they have created. They have done well to introduce a new competitively priced service that was once limited to a “pay to play” type of service. Historically, financial advice has been cheaper only to those with more funds to bring to the table. However, Wealthfront aims to reverse this reality and bring the service to all, especially, tech-savvy millennials. Transparency is important to this group and Wealthfront has no hidden fees. Maintaining this policy would likely be in the best interest of Wealthfront, as well, as introduction of new fees may drive customers away.

Lastly, Wealthfront would do well to create a more hybridized approach to delivery of its service. By utilizing both artificial and human advising services in its suite of services, much like incumbent financial players, Wealthfront can build a stable base of trust between customer and service provider. There is an inherent trust barrier between man and machine. By having a human counterpart present to explain and assist with the use of AI-driven financial advice, Wealthfront may see significantly higher levels of service adoption in its target market.