

Robo-Advisors Are Not New But They Foretell the Future of Financial Advice

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by Joe Tomlinson

So-called robo-advisors have been heralded as the next generation of technology that will transform the financial advice industry. Underneath the considerable debate that has emerged over their potential impact, an obvious fact has been overlooked: Much of what they offer is distinctively “old school.”

Some foresee major disruption, while others predict that the trend will support an expansion of the existing business model. By looking at what is truly innovative about robo-advice – versus what is merely a repackaging of what already exists today – I'll assess the near-term future and what to expect over the next 10 to 20 years.

Recent history

There has been growing recognition that the financial advice business concentrates on an older population with considerable wealth. Those who are younger and in the early stages of accumulating wealth represent a huge underserved market. Silicon Valley employees exemplify this potential market, and it's no coincidence that new robo-advisor firms are based there and receive venture capital support from local investment firms. The new robo-firms include Betterment, Future Advisor, LearnVest, Personal Capital, SigFig, and WealthFront. These firms typically offer automated services for asset allocation, rebalancing and, in some cases, tax-loss harvesting. Even more importantly, they offer user-friendly platforms so that clients can easily stay in touch with their investments.

Bigger firms are also entering the competition with Vanguard and Schwab both offering low-cost advice services. The big firms are also exploring partnerships with the robo-firms and looking for ways not only to serve clients directly, but also to bring the power of automation to their advisor networks. The leader in the partnership game is Fidelity; they have formed partnerships with Betterment and LearnVest and also acquired the financial software firm eMoney, all with a focus on providing enhanced capabilities to their advisor network.

This is an extremely fluid business environment as participants are moving quickly to gain first-mover advantage.

Not leading edge

One might get the impression that we are witnessing leading-edge technology applied to financial advice, similar to advancements in driverless cars, machine learning and smart robots.

But the reality is that the robo-advisor developments remain distinctly old-school.

The automation of rebalancing and tax-loss harvesting involves straightforward rules-based processing. Asset-allocation recommendations reflect the combination of passive investment strategies made popular by Vanguard beginning in the 1970s and mean-variance optimization invented by Harry Markowitz in the 1950s. Although the robo-advisors have generated a lot of strategic rethinking and increased the pace of change in the advice business, they don't incorporate the newest developments in technology.

Near-term predictions

Given that there are robo-initiatives from both established investment companies and new startups, it is difficult to predict who will dominate. My own view is that we will see more of the Fidelity-like arrangements where the established big players take over or partner with the startups to accelerate the introduction of newer (but not new) technology. I expect the focus to remain on accumulation rather than retirement planning; the latter involves additional challenges and complexities that I'll discuss in the next section. Another robo-service I foresee is the management of asset location – how various classes of investments should be allocated among taxable, tax-deferred and taxable accounts during the accumulation phase.

The robo-approach is a natural fit for passive investment strategies. The increase in share for passive versus active favors future robo growth, posing a threat to advisors whose principal business involves maintaining platforms of actively managed funds that they recommend to clients. For the 12 months ending June 30, 2014 Morningstar **reported** that passive funds and ETFs brought in twice the amount of net sales as active funds. This is in sharp contrast to 15 years ago when the passive funds' share was less than 10%.

Another consideration is the extent to which the large investment companies will develop financial planning capability by adding in-house CFPs versus supporting affiliated independent advisors. Vanguard is building in-house capability and lowering the minimums for providing planning services, but also continuing to support its network of advisors. Fidelity is more focused on enhancing the capabilities of its advisor network.

Those large investment firms that do the best job providing technology support for independent advisors will be the most successful in growing their networks. We will see growth over the next few years in both planning services provided in-house and by advisors affiliated with those big investment companies that do the best job with technology. These trends also favor advisors who concentrate on low-cost passive investment strategies and add value by providing advice outside of selecting funds or stocks. Not favored will be the old-style advisors focusing on selecting active managers or providing financial planning services with minimal technology.

Retirement planning

Robo-initiatives have mostly focused on the accumulation stage. Retirement planning is more complex -- particularly for middle-income clients -- and pose more of a technology challenge. Here's a list of



considerations that must be taken into account in generating income for retirement. Those in italics apply to the accumulation stage as well.

- *Asset allocation*
- *Asset location (which investments to place in taxable, tax deferred or tax-free accounts)*
- *Rebalancing*
- *Special management of taxable accounts (e.g., tax-loss harvesting)*
- When to retire
- Social Security claiming strategy
- Withdrawal strategy, consumption planning and expense management
- Product allocation (use of various types of annuities)
- Accessing home equity (downsizing, various types of reverse mortgages)

These are just planning considerations relating to generating retirement income. There are risk-management issues for health insurance to supplement Medicare and for long-term care. Michael Edesess briefly discussed this planning issue in [APViewpoint](#), noting that the above combination of retirement planning considerations "can be mathematically optimized to meet the goals at the least cost."

No one has yet tackled this full optimization, although there has been research on optimizing retirement withdrawals and year-by-year asset allocations as I've written about [here](#). There is even a commercial financial planning application, [ESPlanner](#), that uses optimization, but it has not gained much popularity. Most of the popular financial planning packages deal with regular investments only (not annuities) and don't do optimization – they leave it to the advisor to use trial-and-error testing of different asset allocations and withdrawal amounts. Considering all the possible sources for generating retirement income, this can be a time-consuming process; software should be able to optimize and let the computer do the work.

Although it makes sense to bring this type of optimization to retirement planning, it is not clear when it will happen. Much of the planning done today is for upscale clients with significant wealth, and generating enough income from that wealth to provide the needed retirement income while preserving principal is a common practice. It's only when we move down the wealth spectrum that retirement planning gets more complex and optimization can add the most value.

Beyond the next few years

Now I'll look further ahead to the next decade or two and attempt to assess the potential impact of technology on the financial advice business.

What happens will depend on developments in leading-edge technology in disciplines like cognitive computing, machine learning, artificial intelligence and expert systems. I'll base this section on research projecting the impact of technology on jobs in general and provide my own views on the impact on the financial advice business. My sources include the book "The Second Machine Age" by Erik Brynjolfsson and Andrew McAfee of MIT, the paper "Polanyi's Paradox and the Shape of Employment Growth" by David Autor and the paper "The Future of Employment: How Susceptible are Jobs to Computerisation?" by Carl Benedikt Frey and Michael Osborne of Oxford University.

Frey and Osborne analyzed 702 separate job categories and divided them into high-, medium- and low-risk occupations in terms of the probability of computerization over the next 10 to 20 years. They performed this analysis by focusing on the barriers to computerization – which jobs required hard-to-computerize skills in areas of perception and dexterity, creative intelligence and social intelligence. For many existing jobs they did not find the barriers overwhelming and concluded that 47% of total U.S. employment fell into the high-risk category, with a greater than 70% probability of being computerized. For personal financial advisors, their probability estimate was 59%, placing it in the middle-risk category.

My view is that a single percentage cannot be applied to the long-term risk for financial advisors; it will depend heavily on how advisors develop their businesses. All of the researchers stressed the separation between jobs that will be replaced by automation and those that will be amplified or complemented by enhanced technology support. The latter are jobs with not-easy-to-automate skills and tasks, including: flexibility, judgment, common sense, negotiation, persuasion, intuition, personal contact, creativity, spoken language and guidance. This list of tasks and skills closely matches the job description of a financial advisor.

Newer business models for delivering advice will emerge that succeed in serving more clients and reaching less-wealthy clients. However, many of those following traditional approaches will fail. If we think about retirement planning, for example, it is currently feasible to develop software that takes into account all the different ways of generating retirement income and optimizes the combination. Advisors who take maximum advantage of this and other supporting software will possess a significant advantage in terms of quality of service delivered and efficiency.

Those who continue to rely on just today's software tools will be vulnerable.

Never say never

There are some who dismiss robo-advisors, arguing that technology can never replace the personal delivery of financial advice. I agree but believe we will see major changes in business models for delivering advice. Those who succeed will be able to combine the power and efficiencies offered by new technologies with enhancements in the personal service they provide.



Making an accurate prediction is always challenging. It is particularly difficult to forecast the impact of technology. At the end of their book, Brynjolfsson and McAfee caution, "never say never," when considering the changes we may see. A popular ad from the Super Bowl showed Katie Couric 21 years ago asking the question, "Alison, can you explain what internet is?"

The financial advice business will change a lot in the next 20 years.

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