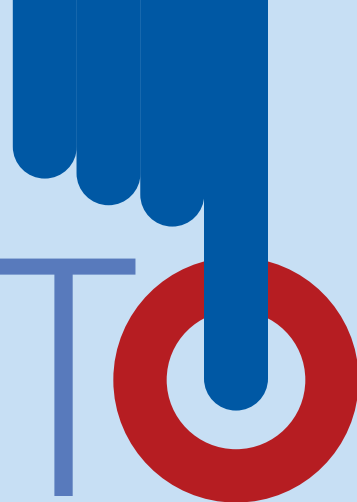


Robo-advisers can
"optimize everything,"
says Jon Stein, CFA



FULL AUTO

By Nathan Jaye, CFA

Robo-advisory firm Betterment has had “an incredible run so far,” according to company founder Jon Stein, CFA. Last year, in terms of assets under management, the firm took the lead among independent robo-advisers. Despite the entry of such large players as Vanguard and Charles Schwab, Stein feels Betterment is poised to capture a big share of the robo-advice market, estimated to hit US\$490 billion by 2020. In this interview, he shares an inside look at the automated investment advisory business, the differences between human and robo-advisers, and the potential for coding ethics into the investment process (“automated ethics”).

Betterment has more than \$3 billion in assets under management now. How's it going?

Our growth has roughly doubled every six months since we launched in 2010. It took us about a year to reach \$10 million on the platform, another six months to get to \$20 million, and then \$40 million by the end of 2011. We keep growing faster and faster.

We started 2015 with about \$1 billion under management, and by December 2015, we had more than \$3 billion and more than 125,000 customers. We launched RetireGuide, which has been a very popular feature, and our 401(k) product comes out in January 2016.

We have over 200 firms using Betterment Institutional today. So we're pushing on a lot of fronts, working to become the best answer to the question, “What should I do with my money?”

How does your process compare with more traditional advisers?

I think there are advantages to each and advantages to different approaches. When you sign up for an account at Betterment and tell us your

goals, you will always get a reliable answer. If you go through the onboarding questions the same way twice, you'll get the same answer. If you change your answers, you'll be able to see how the advice differs, and a lot of people like that kind of repeatability and transparency.

A good adviser would be doing the same things for his or her clients (and some might take more info into account for some clients). The adviser might ask the questions in a different way. But I don't think that makes it any better or any worse. It's just different approaches.

Are automated advisers better than human advisers?

Often, Betterment's advice is compared with traditional advisers—but I'm not sure that's the right comparison to make. It's not really robo-advice versus human advice. We partner with human advisers in our Betterment Institutional business. That's where we have over 200 advisers using our platform. They give advice, they recommend goals to their clients, and they use Betterment's technology to implement that.

If you don't want to have a human adviser, you can come directly to us. You can set up those kinds of things on your own, and we'll make recommendations to you and so on. Most customers who are coming to us directly—and are not with an adviser—are not coming from an advisory relationship. They're usually coming from a do-it-yourself kind of broker.

So the right comparison is not robo-advice versus human advice; it's really robo-advice versus no advice. To those customers, we offer a whole new category of an advised experience for people who want to simply have a better answer to the question, “What should I do with my money?”

You've said Betterment was built from scratch, from the ground up. Did that help you to build in innovation?

Innovation is a huge part of our story. I think it's the most important thing about this company. We started from a place of asking: What would a customer want if we were our own customer? How would we want things to work? Since we are in a highly regulated environment, how can we build this within the constraints of those regulations? How could we apply technology and whatever it takes to give the customer what they want?

Acting as our own customer (and talking to our customers), we found that customers want advice. They want to know, "What should I do with my money? Am I on track?" If you start by asking what the customer wants, you build things in a fundamentally different way. Instead of making it transactional, we've built the entire process around advice and customer alignment. That's how you give better advice, if you start by aligning with them.

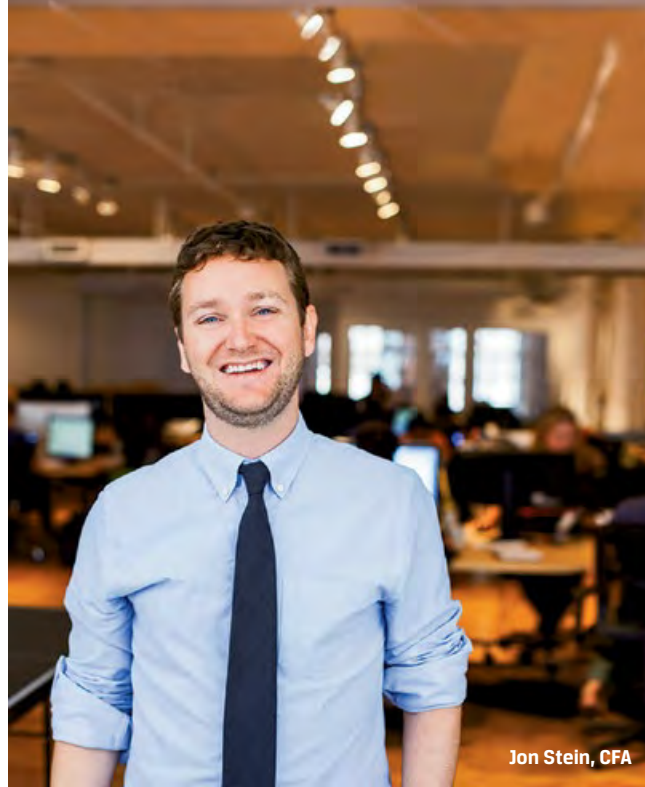
In doing this, we have built fractional shares into our trading systems. We've built advice into our trading system, so every transaction is tax optimized. We avoid wash sales with every transaction. We balance with every transaction. Things that old-fashioned, more transactional models can't do—aren't designed to do—are powered by our newer, smarter technology.

How does your technology work?

Code. We have hundreds of algorithms running all the time, on every account. We optimize everything, because we built it from the ground up, and we built it in an intelligent way. When you deposit money into your Betterment account, we look at your tax situation, we look at your balance, we look at the market changes since you last made a transaction. We look at your future and upcoming dividends, your future upcoming scheduled transactions. We use predictive analytics to help avoid wash sales, even in the future. This is intelligence that no one else has in their trading systems.

Rebalancing is happening on an ongoing basis?

You can think of every transaction as rebalancing your account. If you make a deposit of \$500, we might put all of it in one security if that security is underweighted in your portfolio. If everything is exactly in balance, we'll divvy it up and we'll buy fractional pieces of 12 or 20 different securities. We'll purchase whatever we need for you, so that rebalancing is dynamic and happening with every transaction in your account.



Jon Stein, CFA

Take us through a test drive. What happens when a new investor comes to Betterment?

Our customers often come at the recommendation of a friend or family member. First, they tell us about their goal. They choose goals, and those goals can be things like a down payment on a house, retirement, wealth building, or building a safety net. Based on those goals and the time horizon to those goals, we recommend portfolios for them. We recommend automatic deposits for them. We recommend starting balances for them. We recommend targets.

So it's a fully advised, automated process we walk you through. All of this takes five minutes or less. By the end of that five minutes, you've linked your bank account, and we've actually funded your account.

Once the account is funded, what is the next step?

Well, that's it. You've got your goals, and we'll tell you whether you're on track for those goals or not. Over time, you can log in through our web app or mobile app whenever you like. You can call us whenever you like. It's a fully serviced, managed investment account.

Which investment tools are you using?

It's all ETFs (exchange-traded funds) that we're using. We choose the funds in every asset class that are best for our customers. Because we are aligned with our customers and manufacture our own funds, we have no conflicts in that sense. We're able to choose the very best funds that are out there from all providers, and we choose the ones that are lowest cost—the lowest bid-ask spreads for us and the most liquid.

How large is your universe of funds?

We start with a very large universe of funds. A lot of them are easy to weed out because they're not very liquid, or they

have high expense ratios relative to others in the same asset class. So we get down to a universe of pure funds that are really appropriate for clients to own. We recommend an appropriate balance of those that are globally diversified.

What are the challenges particular to Betterment?

The biggest challenge for us is prioritization, focus, and alignment. I think a lot about this. We want to make sure that we're investing our limited resources in absolutely the most efficient and effective areas to help our customers and to grow the business. So it's very important that we prioritize the right things, and that's a challenge. We spend a lot of time thinking about that.

Can you give an example? Something you did or a direction you changed?

In 2015, we made a decision to focus on 401(k)s. That meant taking resources away from lots of other high-priority projects. There are so many good products to focus on that it was really hard to choose 401(k)s over everything else that's on our plate.

What are your client demographics? Do they tend to be younger people?

I think there's a common conception that robo-advice is for millennials—but our data would suggest that's not the case. The vast majority of our assets come from non-millennials. Something like 30% of our assets come from customers who are older than 50. Less than 30% comes from what we would call millennials.

Automated investing is for everyone. It's a broad-based phenomenon. Everyone wants better service. Everyone wants better advice.

Are your clients particularly tech-savvy? Do you find they're more comfortable with technology as a whole?

I think that's right. In general, people who tend to be early adopters of products tend to be early adopters of other products. They tend to be more tech-savvy because they were early in the tech adoption curve. You don't have to have a self-driving car to use Betterment, but you probably do have to have a smartphone to sort of appreciate what we're doing.

What are your thoughts on automated stock picking?

Early in my career, I learned that stock picking is a losing game unless you have better information. But the reality is that most retail customers do not have better information than, say, hedge funds, institutional investors, or other company insiders. You stand essentially no chance of picking stocks better than those other institutions and funds.

When does robo-advice become the norm?

Eventually, this is the way that everyone will be investing. It's taking into account holistic advice. It's thinking about net returns. It's thinking about risk-adjustment returns. It's fraud diversification. It's goal based. All of this kind of stuff is the right way for people to invest, and it's also the way that everyone will invest.

Is there such a thing as robo-ethics?

I think ethics in the technology field can be moved forward because we can be explicit about what our incentives are, how we're being paid, and what we're doing for customers. We can fully align with customers in a transparent way.

For instance, our algorithms are going to give you the same result no matter what. Now, we wrote that result, and we coded in what the result should be—and it's the right ethical answer for a given client and a given situation. There can be no conflict of interest because everything is explicit. We're not going to give you a different answer on a different day because we have an interest in some security or because we woke up on the wrong side of the bed. Whatever it is we're going to give you is repeatable, transparent, consistent advice—and that makes it necessarily more ethical.

When you're talking about ethics, what's at the core is not really algorithm versus human. It's, "How are you getting paid, and what are your incentives?" We are a fiduciary and a registered investment adviser. As such, we charge a percentage of assets under management. We don't make any money on transactions. We don't make any money on specific stocks. We are fully aligned with our customers.

I would challenge the industry to an even higher ethical standard, one that I think we would meet. We have no conflicts in terms of the products we're recommending. Our only incentive is that we want you to manage more of your assets with us, because that is how we make money. That incentive is clear and aligned with our customers' best interest.

Could ethics be coded into the investment process?

I think ethics are something that people of a company have, and the code will reflect those ethics. If you're transparent, and you share your values with your customers and you start from a place of customer alignment, then those ethics are going to be reflected in the service that you've built.

Once the code is written, it's there, it's auditable, and so on—whereas a broker or a human always has that challenge of their incentives not being completely transparent. Because no one can really audit what's in someone's head at any given time. You can only audit actions, and with Betterment, you can audit actions but you can also audit the code. If we were to have a conflict of interest, we would have to explicitly code that in. I think that's an interesting distinction.

When you say audit the code, do you mean the code is open source?

It's not. You know, some of it could be. We've made some things open source. Not everything is open source, but I do mean that any auditor could come in and say, "We want to see what you guys are doing here. You have to show how the code is making decisions." It's a lot harder to explicitly code in a conflict because of that.

Nathan Jaye, CFA, is a speaker on intelligence and member of CFA Society San Francisco.